DOCUMENT RESUME

ED 139 788 95 SP 011 090

AUTHOR Feldman, Robert Howard
TITLE Involvement in and Satisfaction with Decision Making Related to Staff and Student Behavior in IGE Schools. Technical Report No. 48.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.; Wisconsin Univ., Madison. Research and Development Center for Cognitive Learning.
PUB DATE Jan 77
CONTRACT NE-C-00-3-0065
NOTE 212p.; Ph.D. Dissertation, Wisconsin Univ. ; Parts of document may be marginally legible due to print quality of the original

EDRS PRICE MF-$0.83 HC-$11.37 Plus Postage.
DESCRIPTORS Academic Achievement; Affective Behavior; *Decision Making; Elementary Education; *Job Satisfaction; Participant Satisfaction; *Research and Instruction Units; *Student Behavior; *Teacher Behavior; Teacher Participation
IDENTIFIERS *Individually Guided Education

ABSTRACT

This study examines the validity of the assumption that teacher involvement in and satisfaction with decision-making is systematically related to such organizational effectiveness criteria as (a) teacher job satisfaction, (b) student achievement in reading and mathematics, and (c) student affective behavior, in elementary schools that have implemented Individually Guided Education (IGE). The focus was on one component of IGE, the multi-unit organizational structure, which is designed to facilitate open communication among school personnel, educational and institutional decision-making at appropriate levels, and accountability of educational personnel at all levels. The multi-unit school structure consists of three interrelated hierarchical levels: (1) the Instruction and Research Unit (I&R), the Instructional Improvement Committee (IIC), and the Systemwide Program Committee (SPC). The unit of analysis for this study was the I&R unit. It was hypothesized that involvement in decision-making increases satisfaction, productivity, and organizational awareness; in IGE schools, decision-making at the I&R unit involves the administrators and teachers working together. The subjects included 41 IGE multi-unit schools listed in the 1973-74 Wisconsin Research and Development Center Directory. Unit mean scores were computed for the Decision-Making Analysis Questionnaire, the Teacher Job Satisfaction Survey, student achievement in reading and mathematics, and student self-concept. It was concluded that (1) unit teacher's perceptions of the extent of their involvement in decision-making was related to job satisfaction, and (2) unit teacher's perceptions of their satisfaction with decision-making was related to teacher job satisfaction. Future research is suggested to investigate the student's role in decision-making and its relation to student achievement. A bibliography and sample research instruments are appended. (MM)

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Technical Report No. 408

INVOLVEMENT IN AND SATISFACTION WITH DECISION MAKING RELATED TO STAFF AND STUDENT BEHAVIOR IN IGE SCHOOLS

BEST COPY AVAILABLE

by

Robert Howard Feldman

Report from the Project on
Organization for Instruction and
Administrative Arrangements

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Faculty Associate

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin

January 1977

SP011 090

This Technical Report is a doctoral dissertation reporting research supported by the Wisconsin Research and Development Center for Cognitive Learning. Since it has been approved by a University Examining Committee, it has not been reviewed by the Center. It is published by the Center as a record of some of the Center's activities and as a service to the student. The bound original is in the University of Wisconsin Memorial Library.

Published by the Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred.

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FUNDING

The Wisconsin R&D Center is supported with funds from the National Institute of Education; the Bureau of Education for the Handicapped, U.S. Office of Education; and the University of Wisconsin.

ACKNOWLEDGEMENTS

I wish to express my appreciation and gratitude to my major professor, Dr. James M. Lipham, for his encouragement, support, guidance, and friendship during my graduate study. Special thanks and appreciation are extended to Dr. Donald N. McIsaac and Dr. Richard A. Rossmiller, members of my writing committee, for their patient explanations, for their valuable criticisms, and for their encouragement and support. Appreciation is also extended to Dr. Fred M. Newmann and Dr. B. Dean Bowles for their time, encouragement, and assistance as members of my examining committee.

A debt of gratitude is extended to my colleagues, Conrad Sigurdson, Barbara Bocian, Diana Mendenhall, Colin Moyle, and Noel Watkins, who worked with me in the Organization Component of the Wisconsin Research and Development Center for Cognitive Learning. Their cooperation, assistance, and friendship will always be appreciated.

I am grateful to the Wisconsin Research and Development Center for Cognitive Learning at the University of Wisconsin-Madison for financial support of this research study. Thanks are also extended to the School District of Elmbrook, Wisconsin, Board of Education, which granted me a sabbatical leave and contributed financially to my graduate work. Special thanks is expressed to Dr. Ronald E. Goedken, Superintendent of Schools; Mr. John E. Boie, Principal, Brookfield Central High School; Mr. Irven C. Hoesly, Principal, Pilgrim Park Junior High School; and other personnel of the School District of Elmbrook for their cooperation and encouragement during my graduate work.

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Particular appreciation is extended to Mr. and Mrs. Foster R. Nelson for continually providing support and encouragement.

For her love and patience during this period of my life, Barbara has earned my deepest appreciation.

Finally, I wish to dedicate this study to my mother, Mrs. William H. Feldman, and my father, the late Mr. William H. Feldman, whose love, devotion, and faith have served as constant support throughout my life.

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Abstract

INVOLVEMENT IN AND SATISFACTION WITH DECISION MAKING
RELATED TO STAFF AND STUDENT BEHAVIOR
IN IGE SCHOOLS

Robert Howard Feldman

Under the supervision of Professor James M. Lipham

The purpose of this study was to examine the assumption that teacher involvement in and satisfaction with decision making were systematically related to organizational effectiveness criteria of teacher job satisfaction, student achievement in reading and mathematics, and student affective behavior in multiunit elementary schools that have implemented Individually Guided Education (IGE).

The theoretical and conceptual foundation for this study included three basic theories--general systems theory, social systems theory, and decision theory. The school was considered as a general system, where inputs are transformed into outputs. Decision theory was integrated with social systems theory to analyze the relationship between the independent and dependent variables. Social systems theory provided a framework for analyzing effectiveness or productivity in terms of teacher job satisfaction, student achievement in reading and mathematics, and student affective behavior.

The independent variables were involvement in and satisfaction with decision making as measured by the Decision Involvement Analysis Questionnaire. The dependent variables were teacher job satisfaction

as measured by the Teacher Job Satisfaction Survey; student achievement in reading and mathematics as measured by the Comprehensive Test of Basic Skills, Form S; and student affective behavior as measured by the Self Observation Scales (SOS), Intermediate Level, Form C.

Data were collected from 41 I & R units meeting specified criteria and selected at random from a national population of 959 multi-unit IGE elementary schools in 13 different states. Unit mean scores were computed for the data. Computer programs were employed to obtain Pearson product-moment correlations and to solve multiple regression equations which were used to test the hypotheses of the study. The probability level for all tests of significance was established at .05.

The major conclusions were as follows:

1. Unit teachers' perceptions of the extent of involvement in decision making was systematically and significantly related to teacher job satisfaction.

2. Unit teachers' perceptions of the extent of involvement in decision making was not systematically and significantly related to student achievement in reading, mathematics, or student affective behavior.

3. Unit teachers' perceptions of satisfaction with decision making was systematically and significantly related to teacher job satisfaction.

4. Unit teachers' perceptions of satisfaction with decision making was not systematically and significantly related to student achievement in reading, mathematics, or student affective behavior.

Based upon these findings, suggestions were offered for further research on the types of decision structures and the decision-making process in IGE schools.

APPROVED BY James McLeish

DATE November 24, 1976

CHAPTER I

INTRODUCTION TO THE STUDY

Decision making is an important function of school administrators. Traditionally, principals have used their administrative authority to make decisions in such areas as staff development, in-service training, supervision, evaluation, curriculum, budgeting, student personnel, and home-school-community relations. Their decisions have often been made with limited teacher involvement. Historically, administrators have made policy decisions and teachers carried out these decisions.

In recent years, changes have occurred which coincided with the increasing contribution of the behavioral sciences to managerial thought (Powell and Schlacter, 1971). Teachers have demanded an increasing voice in the governance process of the schools. In addition, organizational theorists such as March and Simon (1965), Getzels and Guba (1957), Argyris (1964), and Etzioni (1964) have been concerned with the involvement of individuals in organizational decision making. From their conceptualizations and research, the concept of participatory decision making has emerged as a basic tenet of organizational behavior affecting both patterns of organizational relationships and leadership styles (Powell and Schlacter, 1971). Heller (1971) gave three reasons for interest in participative decision making. First, its potential importance for administration; second, the concept brings together political and organizational theory and relates to

problems in both; third, the recent interest in the value of work. Thus, participative decision making has become a focal point of interest among both scholars and practitioners of administration.

An underlying premise is that participation in decision making relates systematically to organizational outcomes. It is hypothesized that involvement in decision making increases satisfaction, productivity, and organizational effectiveness. This basic hypothesis lends credence to this present study.

The primary purpose of this study was to test the assumption that teacher involvement in and satisfaction with decision making is positively related to the organizational effectiveness criteria of teacher job satisfaction, student achievement, and student affective behavior in elementary schools that have implemented Individually Guided Education (IGE). A randomly selected sample of forty-one IGE schools participated in this national study and unit leaders, staff teachers, and students from this sample supplied data relevant to the variables described in this study.

In this chapter the theoretical basis and a rationale for the independent and dependent variables employed in this study are presented. Extent of involvement in and satisfaction with decision making are discussed in relation to teacher and student outcomes. Also, effectiveness is defined in relationship to social systems theory and related research regarding the variables is presented.

Background of the Study

Individually Guided Education in the Multiunit School (IGE/MUS-E) is a system which was developed by the Wisconsin Research and Development

Center for Cognitive Learning in cooperation with other educational agencies. IGE is defined as a comprehensive alternative form of schooling designed to produce higher educational achievements through providing for differences among students in learning rate, learning style, and other characteristics (Klausmeier, Quilling, and Sorenson, 1971, p. 17). Figure 1 shows that the IGE system is composed of seven components: the multiunit organizational structure, a system of instructional programming for the student, a system of evaluation for educational decision making, curriculur materials compatible with the system of instructional programming and evaluation, a program of home-school-community relations, intra and extraorganizational environments which facilitate the implementation of IGE, and continuing research and development to improve and refine IGE concepts and practices.

The focus of this study was on the multiunit organizational structure component of IGE. The organizational structure of the multiunit elementary school is designed to provide for open communication among school personnel, educational and institutional decision making at the appropriate levels, and accountability by educational personnel at all levels (Klausmeier, et al., 1971, p. 17). Figure 2 shows the prototypic multiunit school structure consisting of three interrelated hierarchical levels: the Instruction and Research Unit (I&R), the Instructional Improvement Committee (IIC), and the System-wide Program Committee (SPC). Because the emphasis of this study is on the I&R Unit, a discussion of its organization and functions follows.

In IGE schools, semiautonomous I&R units replace the age-graded self-contained classroom organization that has been prevalent in

Figure 1. Components of Individually Guided Education (Based on: H. J. Klausmeier, M. R. Quilling, J. S. Sorenson, R. S. Way, and G. R. Glasrud Individually Guided Education and the Multiunit School: Guidelines for Implementation. Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, 1971, Ch. 2).

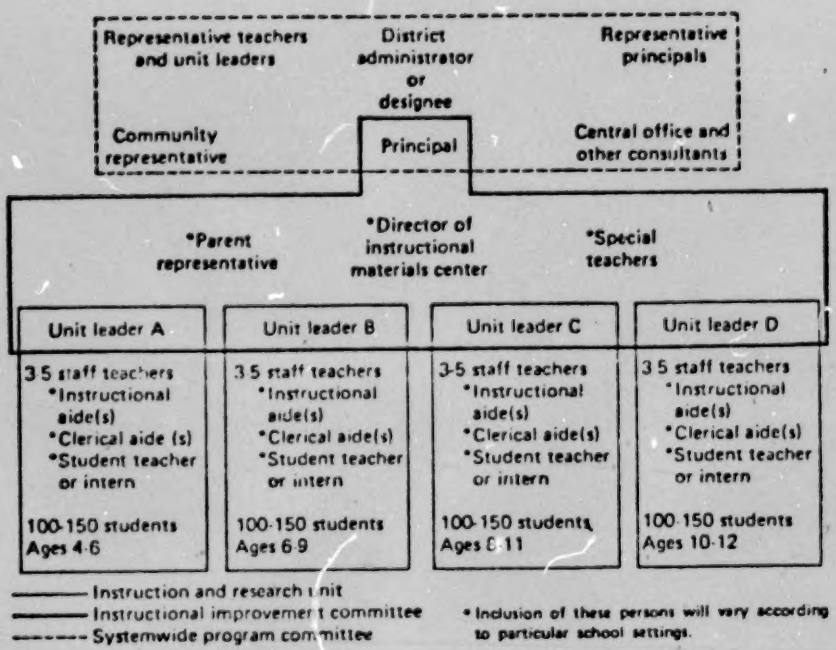

Representative teachers and unit leaders
District administrator or designee
Representative principals
Community representative
Principal
Central office and other consultants
*Parent representative
*Director of instructional materials center
*Special teachers
Unit leader A
Unit leader B
Unit leader C
Unit leader D
3-5 staff teachers *Instructional aide(s) *Clerical aide(s) *Student teacher or intern
100-150 students Ages 4-6
100-150 students Ages 6-9
100-150 students Ages 8-11
100-150 students Ages 10-12
Instruction and research unit
Instructional improvement committee
Systemwide program committee
*Inclusion of these persons will vary according to particular school settings.

Figure 2. Multiunit organization of an IGE school of 400-600 students. (Adapted from: Herbert J. Klausmeier, Richard G. Morrow, and James E. Walter, Individually Guided Education in the Multiunit School. (Madison: Wisconsin Research and Development Center for Cognitive Learning, 1968).

elementary schools for many years. The multiunit organization not only creates the new role of unit leader, but also gives depth and meaning to the roles of principal, teacher, and other personnel. Provisions made for intra and interunit planning are designed to foster participation in decision making by all staff in the school (Nerlinger and Lipham, 1976).

The I&R unit typically includes the unit leader, three to five staff teachers, a clerical or instructional aide, a student intern, and 100 to 500 students. The major functions of the I&R unit include the following: (1) devising, conducting, and evaluating an instructional program appropriate for each student in the unit; (2) managing the use of time, space, equipment and curricular materials and resources in providing instructional activities; (3) engaging in on-the-job in-service training and staff development activities; (4) providing clinical experiences for interns and student teachers; and (5) conducting research and development activities to enhance the learning of each child (Lipham and Fruth, 1976).

The teachers of the I&R unit work jointly to teach a group of students through utilizing the Instructional Programming Model (IPM) which calls for initial pupil assessment, setting up individual objectives, placing of students in the appropriate learning activities, postassessing, and reevaluating the child's performance according to his or her achievement, learning style, and preferences. The implementation of this model depends upon cooperation, interaction, communication, and shared decision making among the faculty members.

Instructional decision making at appropriate levels is a primary objective of the IGE school (Klausmeier, et al., 1971, p. 17). Therefore, decisions in IGE schools at all organizational levels are not made hierarchically, but are a participative effort involving administrative and staff interaction and discussion. At the I&R unit level, the unit leader, staff teachers, and aides make decisions about instructional resources and activities and contribute their ideas to the unit leader to be transmitted to the IIC.

The Instructional Improvement Committee (IIC), consisting of the principal and the unit leaders, is the decision making body at the building level. Other building personnel, including the director of the instructional materials center, may meet with the IIC. The IIC can be viewed as coordinating the functions of the I&R units. This responsibility includes determining schoolwide objectives, making policy decisions, and determining curricular programs which affect all of the students (Lipham and Fruth, 1976, p. 32).

At the school district level, members of the IIC may serve on the Systemwide Program Committee (SPC), consisting of central office staff, principals, unit leaders, and teachers, which deals with problems that involve the entire district. The SPC identifies the functions to be performed in the IGE schools, recruits personnel, arranges in-service education, provides instructional materials, and disseminates relevant information within the school system (Lipham and Fruth, 1976, p. 33).

This study focused on the relation between the extent of involvement in and satisfaction with decision making at the I&R unit level and

a multiple set of organizational outcome measures which included teacher job satisfaction, student achievement in reading and mathematics, and student affective behavior. The following review of literature discusses the rationale and theoretical foundation for the study.

Theoretical Framework and Related Literature

The conceptual and theoretical foundations of this study are based on three theories: general system theory, social systems theory, and decision theory. This study and three companion studies by Bocian (1976), Mendenhall (1976), and Sigurdson (1976) are based on general systems theory as it conceptualizes the relationships between inputs and outputs in an educational system. Second, social systems theory, within the framework of systems theory, provides the overall theoretical basis for this study, as well as the basis for analyzing the relationship between role, personality, and effectiveness criteria. Third, because this study dealt with participatory decision making, a discussion and review of decision theory is presented.

General Systems Theory

The theoretical framework upon which this study is based is that of general systems theory. A system can be defined simply as a complex of elements in mutual interaction (Griffiths, 1964). Systems can be open or closed. An open system exchanges matter, energy, and information with its environment, that is, it has inputs and outputs. Therefore, schools can be viewed as open systems which transform resources into outputs.

Lipham (1974), conclusing that there is no universally accepted theory of general systems, conceptualized a model of the school as a general system, where inputs to the school in the form of teachers, students, materials, and facilities from the larger supra system are transformed into outputs, including productivity, affectivity, and feedback (see Figure 3). This study was concerned with the inputs, processes, and the outcomes of teacher job satisfaction, student cognitive achievement in reading and mathematics, and student affective behavior.

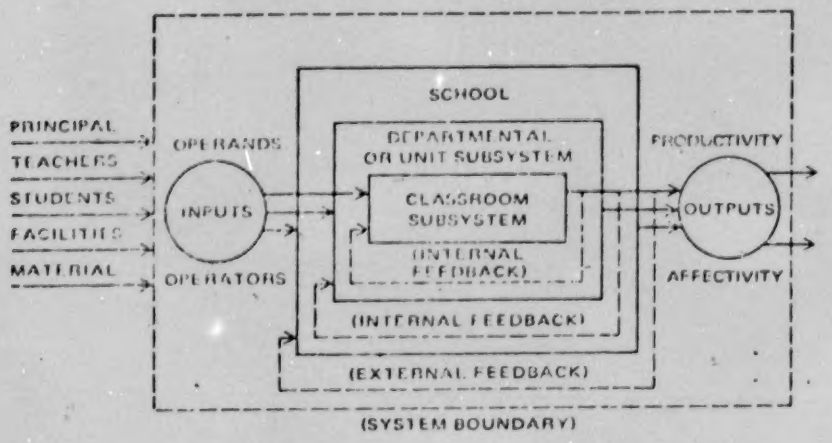


Figure 3--The school as a general system

Source: James M. Lipham and James A. Hoeh, Jr., The Principalship, Foundations and Functions, (New York: Harper and Row, 1974, p. 34).

Social Systems Theory

Social systems theory constitutes the second basic conceptualization of this study which relates participation in decision making to organizational effectiveness. Attention first will be directed to a discussion of the dimensions of social systems theory and then decision

theory will be used to explain the two independent variables--extent of involvement in and satisfaction with decision making.

As shown in Figure 4, a school can be conceived as a social system consisting of two dimensions of behavior, the normative or institutional dimension, and the idiographic or personal dimension to produce observed social behavior (Getzels, Lipham, and Campbell, 1968). The normative dimension is defined in terms of institutional roles and expectations and the idiographic dimension represents the individual personality and need-dispositions (Getzels and Guba, 1957). According to this model, social behavior is a function of the interaction between the institutional role expectations and the personality of the role incumbent defined by his or her need-dispositions (Lipham and Hoeh, 1975).

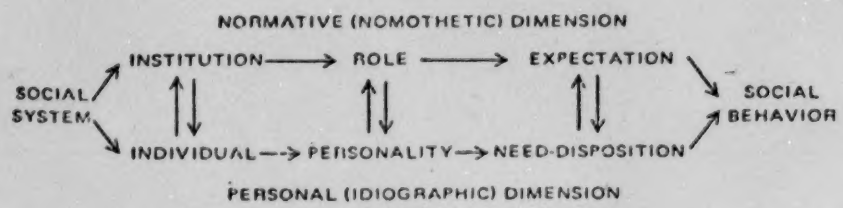


Figure 4--Normative and personal dimensions of social behavior

Source: Adapted from J. W. Getzels and E. G. Guba, "Social Behavior and the Administrative Process," School Review, 65 (1957), 429. Copyright 1957 by the University of Chicago.

The central focus of the social system defined for this study was the I&R unit of the IGE elementary school. As shown in Figure 5, general systems theory encompasses the basic interacting elements of social systems theory. The model shows the relationship between the inputs and outputs. In this study, the inputs are the resources of the

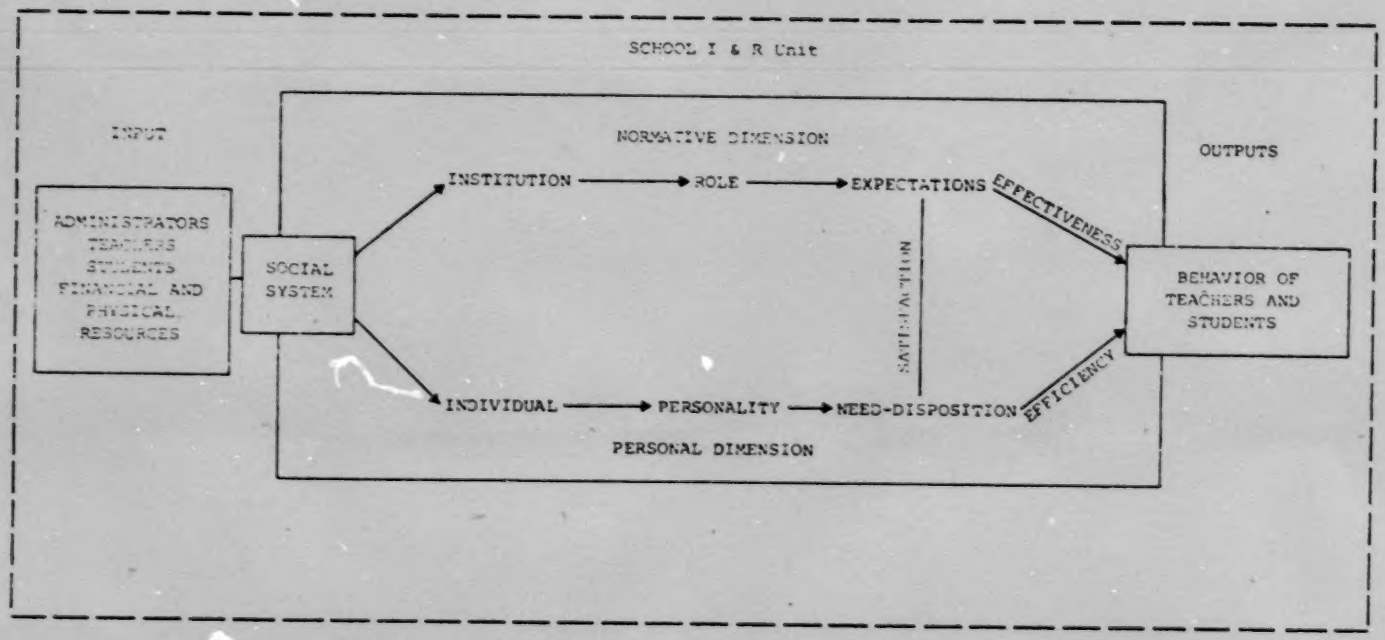


Figure 5. The General and Social System

social system which includes the roles and expectations. The personal dimension of this model concists of the staff members with their personalities and need dispositions. In addition, the model depicts effectiveness, which is defined as the congruence between role expectations and behavior (Getzels, Lipham, and Campbell, 1958).

Decision Making Theory

To gain a clearer understanding of the process portion of the general and social system model as depicted in Figure 5, one must examine decision theory within the context of social systems theory. Decision making is central to the administrative process. This point has been emphasized by Gregg (1959), McCamy (1947) and Simon (1960). Decision making is usually viewed as a process consisting of variety of steps related in a linear, rational model. One such model, presented by Griffiths (1958), consisted of six steps. A second model of decision making posed by Dill (1964) contained four basic steps which include: agenda building, research, commitment, and evaluation. Lipham (1976) developed a systems oriented model of decision making and defined decision making as:

> ...a process, influenced by information and values, whereby a perceived problem is explicitly defined, alternative solutions are posed and weighed, and a choice made that subsequently is implemented and evaluated. (p. 2)

The key steps of the Lipham model, as shown in Figure 6, include process, problems, awareness, information, values, perceptions, alternatives, choice, and estimated outcomes (Lipham, 1974). In addition, Lipham (1976), using a three dimensional model, has shown the decision-making process can be analyzed by determining the real and ideal level

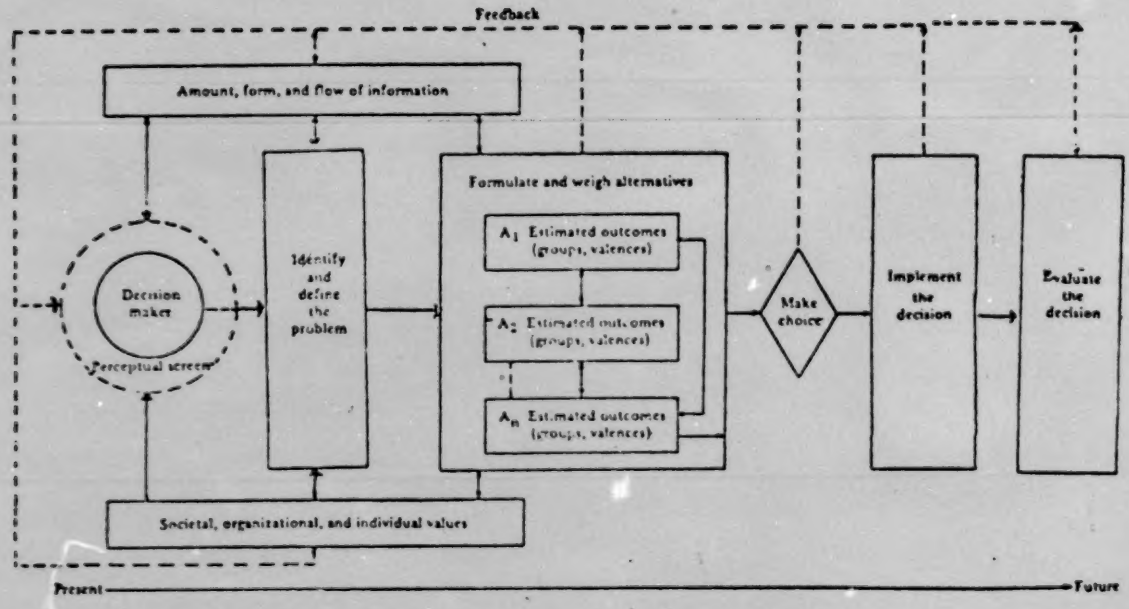


Figure 6. Model of the Decision-Making Process

Source: James M. Lipham, "Making Effective Decisions," in Jack A. Culbertson, Curtis Henson, and Ruel Morrison, eds., Performance Objectives for School Principals (Berkeley, CA : McCutchan, 1974), p. 88.

of involvement (Figure 7). This study added satisfaction with decision making as a major variable which was investigated. An examination of the extent of involvement in and satisfaction with decision making enables the practitioner to obtain a realistic perspective of the decision making process of the total organization.

For many years, organizational theorists have recognized the importance of workers' motivation to perform. A multiplicity of inducements have been offered to hold workers and to stimulate them to higher levels of performance (Shull, Delbecq, Cummings, 1970). One method which has been suggested as favorably affecting performance is that of participation in decision making. March and Simon (1958, p. 54) concluded, "...the more the felt participation in decisions, the less visibility of power deficiencies in the organization, and that the latter in turn, lessens the evocation of organizationally disapproved alternatives."

Additional organizational theorists emphasize the value of worker participation as a way to increase performance. Katz and Kahn (1966, p. 350) stated, "Such involvement should result in a variety of behavior supportive of the organizational mission." Etzioni (1968) concluded that there is no alternative for future organization but to allow participation of members in the development of goals and decisions. Galbraith (1967) viewed involvement as an important aspect of the motivational system of an organization. Argyris (1964) found utility for including the workers in the process of setting goals and decisions. The literature supports the hypothesis that as teachers become more involved in participatory decision making they identify with the goals

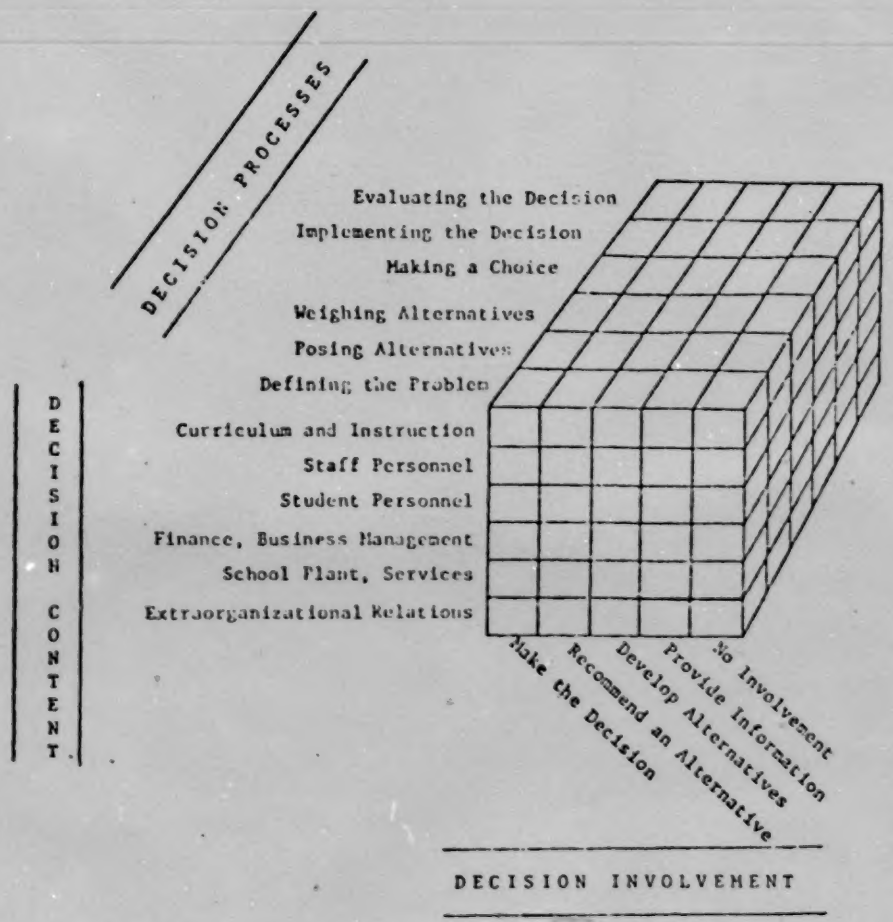


Figure 7. Three Basic Dimensions of Decision Making

Source: James M. Lipham, "Making Effective Decisions," in Jack A. Culbertson, Curtis Henson, and Ruel Morrison, ed., Performance Objectives for School Principals, (Berkeley, CA: McCutchan, 1974), p. 106.

of the organization and may be motivated to perform at a higher level.

This study, as shown in Figure 5, integrates decision theory within social system theory to study the relationship between the independent and dependent variables. In terms of this study, the institutional role expectations are represented by the items assessed by Wright (1976) in the Decision Involvement Analysis instrument and adapted for this study. These items encompass the basic institutional role expectations which enable the determination of the extent of involvement which is the first independent variable.

Coch and French (1952), stated that degree of participation in decision making by workers in an industrial setting was related to efficiency, turnover, and morale. This study divided participation in decision making into three categories: no participation, participation through representation, and total participation. Coch and French found that workers with total participation had a higher productivity rate than the other workers. Also, the worker group participating through representation had a higher productivity rate than a group with no participation (Coch and French, 1952, pp. 474-79).

A study conducted by Vroom (1960) examined the relationship between participation and authoritarian personality as independent variables and worker attitudes and performance as dependent variables. He found a strong positive relationship between participation in decision making, job attitudes, and effectiveness for workers with a high need for independence and a low personality rating on authoritarianism.

A study conducted over a four-year period in a plastic company compared three models for the management of workers: exploitive-

authoritative, benevolent-authoritative, and consultative-participative (Tannebaum, 1966). The results indicated that the consultative-participative experimental group increased communication, organizational control, and effort.

According to social systems theory, congruence between the institutional role expectations and the need dispositions of the members of the groups (I&R unit) determine a measure of satisfaction with decision making which is the second independent variable (see Figure 5).

Alutto and Belasco (1972, p. 118) suggested that researchers too often maintain that the desire for increased participation is equally distributed throughout an organization. Research in this area reveals the major determinant of the preference level for participation in decision making is the importance of the decision to the subordinate (Maier, 1965) and the feeling that a person is participating in decision making (Tannenbaum and Smith, 1966). Where the decision is very important to the individual, one is likely to prefer consultation or even autocratic decision making (Yukl, 1971). Individuals may wish to participate in decisions from which they are excluded, and they may not wish to participate in some of the decisions in which they are currently involved (Alutto and Belasco, 1972, p. 19). Heller and Yukl (1969), concluded that for a particular group there is likely to be some optimal pattern of decision making which will consist of various amounts of delegation, past decision making consultation, and autocratic decision making. The optimal pattern is likely to involve some immediate amount of subordinate influence, rather than the greatest number (Yukl, 1971).

These findings indicate that some people would be both satisfied and dissatisfied with their level of involvement in decision making. Often, this relationship is perceived as being linear but further study might indicate it to be curvilinear. If so, at some point, participation in decision making can become dysfunctional. Therefore, it might be possible to have too much as well as too little participation in decision making in IGE schools.

Previous research regarding the decision-making process in IGE schools has produced significant results that are relevant to this study. Pellegrin (1969) found that few IGE teachers made decisions without sharing ideas with others in the group process. He also found teacher satisfaction greater in IGE than in non-IGE schools. Walter (1973) found that multiunit schools were significantly less centralized in their decision-making process than were non IGE schools. Herrick (1974) concluded that the higher the degree of centralization in decision making, the lower the degree of teacher satisfaction. Loose (1973) analyzed the decisions made by the IIC and found that sixty percent were made by the principal. Nerlinger (1975) found a positive relationship between involvement and representation in decision making and effectiveness of the instructional program in IGE elementary schools. Wright (1976) found that IGE teachers perceived a moderately high level of involvement in the decision-making process of potent decisions of the unit/subunit scope and perceived a relatively low level of involvement in decisions of school-wide and extra-school scope. In addition, IGE teachers desired greater involvement in making decisions, especially of the school-wide and extra-school scope.

Effectiveness

Social systems theory provides a framework for analyzing effectiveness or productivity as an organizational outcome which, according to organizational theorists, is a function of an individual's ability to participate in organizational decisions. As shown in Figure 5, the school is a social system in which members of the I&R unit participate in the decision process. This study used multiple effectiveness criteria teacher job satisfaction, student cognitive achievement in mathematics and reading, and student affective behavior--as measures of organizational effectiveness which constitute the major dependent variables.

Effectiveness was defined by Getzels, Lipham, and Campbell (1968, p. 129) as a measure of concordance of role behavior and role expectations. Greater organizational effectiveness or productivity is the result of the congruence of the institutional role expectations and role behavior. It is also possible to conclude that if the institutional role expectations are defined jointly, then the role expectations and the need dispositions of the participants are more likely to result in a congruence of satisfaction with decision making (Nerlinger, 1976).

Teacher Job Satisfaction

This study examined teacher job satisfaction as the first of three organizational outcome measures. Extensive research conducted in both industrial and school settings has examined the correlation between participatory decision making and job satisfaction. Researchers in industrial settings have generally found a positive relationship

between participation and job satisfaction (Vroom, 1959; Yukl, 1969; Tosi, 1970). Also, Morse (1953) found that workers reported more job satisfaction when the amount of decision making in which they were involved equalled the amount they desired.

Schmuck and Blumberg (1969, p. 104), in relating participation and job satisfaction in a school setting stated,

> Participative decision making in organizations seems to make for more productive problem solving and an enhanced sense of satisfaction and organizational identity...We view the movement in the participative direction as increasing the likelihood of organizational productivity.

Other studies in school settings also concluded that there is a positive relationship between decision involvement and teacher job satisfaction (Schmuck, and Blumberg, 1969; Chase, 1952; Sharma, 1950; Belasco and Alluto, 1972; Ambrosie and Heller, 1972).

Student Achievement

The second organizational outcome examined in this study as a dependent variable was student achievement in reading and mathematics. In the context of social systems theory, organizational effectiveness is a dynamic conceptualization related to both teacher and student behavior. Theoretically, this study posits a relationship between organizational effectiveness and the effect of teacher and student behavior. The interacting nature of teaching effectiveness and the impact of the learner has been studied (American Educational Research Association, 1950; Astin and Lee, 1966; and Biddle and Ellena, 1964).

Research regarding the effects of teacher influence (Flanders, 1964), school facilities, family, and socioeconomic status (Coleman,

1966), on student achievement has been conducted. A companion study by Sigurdson (1976) examined the relationship of these factors.

Several studies have been conducted which assessed changes in reading and mathematics achievement in IGE schools. Bradford (1972) found that students in IGE schools achieved a significantly greater increase in mathematical skills than was achieved by students in the self-contained schools, and she found that students in IGE schools achieved greater gains in reading than students in the self-contained schools but the difference was not statistically significant. A study by Burtley (1974) of math and reading achievement of second and third grade students over a two-year period revealed that they achieved significantly greater mean gain scores when compared to a similar group of students in a self-contained elementary school.

Several school district studies also have reported student achievement gains in IGE schools. Kennedy (1972) reported that student achievement was significantly higher in the IGE school. Similar conclusions were found in a study conducted in Janesville, Wisconsin (Hackett and McKilligan, 1972). Klenke (1976) concluded that evidence is tending to indicate that IGE does have the potential for improving student achievement.

Components of the multiunit school organization have been developed to encourage participative decision making which could result in higher student achievement and affective behavior. Klausmeier (1977) has written that students in IGE schools should produce higher student achievement than attained by students in traditional elementary schools and also should develop a healthy self concept.

Student Self Concept

The final organizational outcome measure employed in this study was student affective behavior. This dependent variable was defined as those feelings and attitudes that a child holds toward himself/herself, peers, teachers, and school. Theoretically, self concept is an important determinant of personality (Mead, 1934; Lewin, 1936; Allport, 1937) and a person's behavior (Rogers, 1951; Syngg and Combs, 1949). Although there is no universally accepted theory of self concept, Kinch (1963, p. 48), has presented a formalized theory of self concept: "The individual's conception of himself/herself emerges from social interaction, and in turn, guides or influences the behavior of that individual."

An individual's self concept is developed through a series of interactions with the environment in which parents, peers, and teachers have a significant impact. The influence of schooling upon the development of self concept is often neglected. Teachers are in a particularly important position to enhance or inhibit student self concept (Bocian, 1976).

Significant research in this area has been conducted by Katzenmeyer and Stenner (1973, 1975) using the Self Observation Scales (SOS). Their results suggest a positive relationship between between self concept and achievement. A more complete discussion of self concept can be found in the companion study by Bocian (1976).

Statement of the Problem

The purpose of this study was to examine the relationship of the extent of teachers' involvement in and satisfaction with the decision

making process in multiunit IGE schools to staff job satisfaction, student cognitive behavior and student affective behavior. The independent variables were involvement in and satisfaction with decision making as measured by the perceptions of the teachers. The dependent variables were teacher job satisfaction, student achievement in mathematics and reading, and student affective behavior.

The major terms in this study are defined as follows:

1. Extent of Involvement in Decision Making--The teachers' perceptions of the level to which the teacher participates in identifiably potent decision areas, ranging from "very little involvement" to "very much involvement."
2. Satisfaction with Decision Making--The extent to which the teachers feel that their degree of involvement in identifiably potent decision areas is congruent with their needs as individuals, ranging from "not satisfied" to "very satisfied."
3. Effectiveness Criteria--A multiple set of organizational outcome measures which include teacher job satisfaction as measured by the Teacher Job Satisfaction Survey; student achievement in reading and mathematics as measured by the Comprehensive Test of Basic Skills (CTBS) and student affective behavior as measured by the Self Observation Scales (Katzenmeyer and Stenner, 1973).

Hypotheses

The major hypotheses of the study, stated in null form, were as follows:

1. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and teacher job satisfaction.

2. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in reading.

3. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in mathematics.

4. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student affective behavior.

5. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and teacher job satisfaction.

6. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in reading.

7. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in mathematics.

8. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student affective behavior.

Significance of the Study

Research in the area of participatory decision making is necessary to discover whether or not the emphasis on decisions in terms of the potency for one's work relates to certain organizational outcomes. Furthermore, this study will provide insight regarding the adequacy of the general systems and social systems theory which hypothesizes a systematic relationship between participatory decision making and the

organizational outcome measures. In terms of practice, too much or too little decentralization of decision making may relate to organizational outcomes.

This study is also significant because little research has been completed which relates satisfaction with decision making to the multiple effectiveness criteria of teacher job satisfaction, student cognitive achievement, and student affective behavior.

The results of this study should be of significance both to theoreticians and practitioners in IGE. Theoreticians will be able to use the results to refine the IGE/MUS-E model and as a guide for future research. Practitioners will be able to utilize the results of this study to implement, develop, and further refine the IGE program in schools throughout the country.

Limitations of the Study

Some of the instruments used in this study, the Decision Involvement Analysis, Teacher Job Satisfaction, and Self Observation Scales (SOS), measures depend upon the perceptions of the individual teacher and student respondents. Individual teachers and students may also perceive these variables in different ways which will induce some possible bias and inaccurate perceptions.

Because the sample is only from intermediate I&R units of IGE schools, the results cannot be generalized to other I&R units or curricular areas. In addition, it must be emphasized that this research project is a correlational study which can identify the relationships between variables and not the causes. According to Lehman and Mehrens,

1971, p. 190), a correlational study does, however, provide clues for determining causal relationships.

Overview of the Study

This Chapter first presented the basic organizational structure of the multiunit school components of Individually Guided Education. The theoretical and conceptual foundations of the three basic theories of this study, systems theory, social systems theory, and decision theory, were discussed. Literature related to participative decision making and the multiple set or organizational outcome measures including teacher job satisfaction, student achievement in mathematics and reading, and student affective behavior were also discussed. In addition, the statement of the problem, the hypotheses, the significance and the limitation of the study were included.

Chapter II will include a description of the design and methodology of the study. Chapter III will present and analyze the data. Chapter IV will present a summary of the study, findings, conclusions, and implications for further research and practice.

CHAPTER II

DESIGN AND METHODOLOGY

This chapter includes a discussion of the design and methodology of the study. Specifically, the chapter deals with the study instruments, the population and sample selection, the procedures for data collection, and the statistical analysis.

Description of the Instruments

It was hypothesized in this study that extent of involvement in and satisfaction with decision making are related to staff and student behavior. The independent variables consisting of involvement in and satisfaction with decision making were measured by the Decision Involvement Analysis Questionnaire (Appendix A). The dependent variable consisting of teacher job satisfaction was measured by the Teacher Job Satisfaction Survey (Appendix B); student achievement in mathematics and reading was measured by the Comprehensive Test of Basic Skills (CTBS) (Appendix C); and student affective behavior was measured by the Self Observation Scales (SOS) (Appendix D). An explanation of the background, development, reliability, and validity of the instruments follows.

Decision Involvement Analysis Questionnaire

The Decision Involvement Analysis Questionnaire was designed to measure teachers' perceptions of involvement in and satisfaction with decision making. Three versions of the instrument were developed by Wright (1976), to measure scope and potency of involvement in decision

making in ICE schools. The third version of this instrument was modified for the purpose of this study to include questions on the extent of involvement in and satisfaction with decision making. Staff members of I&R units were asked to indicate the extent of their involvement in and satisfaction with decision making by assigning a number from one to five using a Likert-type scale. The response set for determining extent of involvement, ranging from low to high, was: "very little involvement" to "very much involvement". The response set for measuring satisfaction with decision making, ranging from low to high, was: "not satisfied" to "very satisfied". The institutional role expectations were indicated by specific decision content items. For example, an item stated as follows: "The approval of instructional materials to be purchased." The Decision Involvement Analysis Questionnaire asked for two responses on each of the decision content items, one for involvement in decision making, and the other, for satisfaction with decision making.

The items were divided into three scales: (1) Extra-school, (2) School-wide, (3) Unit-wide. These scales were developed as a result of a factor analysis conducted by Wright (1976). PROGRAM BIGFACT (Spuck and McIsaac, 1971) was used to determine the three basic factors.

Scale I contains decision content items of a district wide administrative nature as represented by decision involving evaluation of job performance, expenditures of money, planning, and evaluation of job performance, and the transfer of personnel. Scale II contains decision content items which pertain to the school including approval and evaluation of instructional materials, coordination of curriculum, amount of

planning time, and number and nature of parent teacher conferences. Scale III contains decision content items which pertain to unit-wide activities such as grouping students, design and content of curriculum, and specific instructional objectives.

The scales and items are as follows:

FACTOR I (Extra-School)

The procedures to be utilized in evaluating a principal's performance

The procedures to be utilized in evaluating a teacher's performance

The criteria to be utilized in evaluating preservice and inservice programs

The nature and extent of consultant help from outside the school

The transfer of teachers from one I&R unit to another I&R unit within your school

The topics for the inservice program

The amount and nature of supervision of teaching methods

The budget of the school

The extent of involvement of parent advisory groups in the programs of the school

FACTOR III (School-wide)

The approval of instructional materials to be purchased

The coordination of curriculum across units within a school

The amount of planning time provided unit teachers for unit-related activities

The procedures to be utilized in evaluating instructional materials within the school

The criteria to be utilized in evaluating instructional programs within the school

The number and nature of parent-teacher conferences

FACTOR III (Unit-wide)

The grouping to be utilized for instruction (one-to-one, small group, etc.)

The design and content of the curriculum within a unit

The area(s) in which unit teachers should specialize

The specific instructional objectives each child is to attain

The content validity of the questionnaire was established by a panel of six members including teachers, unit leaders, and principals who judged the instrument in terms of appropriateness of items, item construction, and ambiguity. Additional refinement and validation of the decision content areas was completed by questionnaires and in interviews conducted by Wright (Wright, 1976, p. 33).

The reliability of the Decision Involvement Analysis instrument was determined by Wright (1976) using PROGRAM TSTAT (Spuck, 1971). This program calculated the alpha-coefficients of internal consistency for the questionnaire, as presented in Table 1. Because of modifications made in the instrument for the purpose of this study it was necessary to recalculate the reliability for extent of involvement in and satisfaction with decision making. As shown in Table 2, the reliabilities derived from the present study are consistent with those obtained by Wright.

TABLE 1

RELIABILITY SCORES FOR SCALES AND TOTAL INSTRUMENT
DECISION INVOLVEMENT ANALYSIS QUESTIONNAIRE

Scales	Version III
1. Extra-School	.7659
2. School-Wide	.6892
3. Unit Wide	.7415
Total	.8478

TABLE 2

ALPHA-COEFFICIENTS OF INTERNAL CONSISTENCY FOR
THE INDEPENDENT VARIABLES
(N=178)

	Scale 1	Scale 2	Scale 3	Total
Decision Involvement	.7515	.6845	.6879	.8181
Satisfaction with Decision Making	.7669	.7235	.7025	.8457

Teacher Job Satisfaction Survey

Teacher job satisfaction was measured by the Teachers Satisfaction Survey developed by the R-3 research component at the R&D Center. As noted by Smith and Dunham (1976, p. 3) the foundation of any empirical study of job satisfaction is the instrument used to determine those effective responses to the job.

The research component adopted as basic guidelines for developing this instrument the criteria of a good measure of job satisfaction as outlined by Smith, Kendall, and Hulin (1969). The criteria of a job satisfaction instrument include: (1) separate the various aspects of satisfaction from one another; (2) agree with other, equivalent measures; (3) be useful with a wide range of persons from a wide range of jobs and a variety of situations; (4) be intuitively understandable; (5) be short; (6) allow group administrations; and (7) require low expenditures of time and money.

Because individual satisfaction is a multi-dimensional matter (Taylor and Bowers, 1974, p. 76), this instrument was based on previous research conducted by Smith and Dunham (1976); Smith, Kendall, Hulin (1969), Weiss, Davis, England and Lofquist (1967) and Chase (1952) who presented significant dimensions of job satisfaction in an industrial setting. These dimensions were adapted for use in a school setting to measure teacher job satisfaction with the administration, coworkers, career future, school identification, financial aspects of the job, working conditions, pupil relations, and community relations. Staff members of I&R units were asked to indicate their feelings of satisfaction with their particular situation by assigning a rating of one to five using a Likert-type scale. The response set for determining teacher job satisfaction, ranging from low to high was: "not satisfied" to "very satisfied". The scales and content items for the instrument are as follows:

Administration

The professional competence and leadership of your building administrators

The ability of your building administrators to encourage people to work together

The manner in which school policies and regulations are enforced

The recognition you receive from your building administrators for your teaching achievements

The procedures used to evaluate teachers in your school

The fairness of the building administration in the assigning of extra duties

The opportunities provided to discuss problems with building administrative personnel

The trust you have in your building administrators

The administrators' trust in you

The innovativeness of your building administrators

Co-Worker

The personal and social relationships you have with other teachers

The recognition you get from other teachers for your work

The quality of work of other teachers in your school

The amount of work done by other teachers in your school

Career Future

Teaching, in light of what you expected to be doing as a teacher

Your future in your school district

Your opportunities for growth in your profession

School Identification

Your school as an organization to work for

The professionalism your school district shows towards teachers

The degree of your involvement in your school

The general reputation of your school

The opportunities that you have to influence school policy

Your awareness of what is "going on" in your school

The goals emphasized by your school

Financial

The amount of money you make

The salary schedule and fringe benefits in your school district

Working Conditions

The physical facilities of your school

The number of students accommodated in your school

The availability of appropriate instructional materials and equipment

The arrangement of space and equipment in your school

The amount of preparation time provided for teachers in your school

The custodial services provided in your school

The quality of work you do

The extent to which you are motivated by your job

The freedom that you have to experiment with instructional methods

The intellectual stimulation that you receive from your work

The opportunities that you have to teach in your major areas of interest

The amount of work you are expected to do

The amount of time that you actually spend in teaching

Pupil Relations

The total time that you spend with students

The number of students for whom you are responsible

The extent to which you are able to meet your students' academic needs

The extent to which you are able to meet your students' affective needs

Community Relations

The extent to which the community recognizes and appreciates its educators

The adequacy of financial support provided your school by the community

The understanding of your school's programs by parents and the community

The community's involvement in your school's program

The methods used to communicate with the community about your school

The methods used to report student progress to parents

Reliability of the Teacher Job Satisfaction Survey was calculated using PROGRAM TSTAT (Spuck, 1971). The results which are presented in Table 3 indicate that the reliability as shown by the alpha coefficients is at an acceptable level. (Nunnally, 1967, p. 211).

TABLE 3

ALPHA-COEFFICIENTS OF INTERNAL CONSISTENCY FOR TEACHER JOB SATISFACTION

(N=178)

Scale 1	Administration	.9499
Scale 2	Co-worker	.8608
Scale 3	Career Future	.8092
Scale 4	School Identification	.8836
Scale 5	Financial	.9250
Scale 6	Working Conditions	.8837
Scale 7	Pupil Relations	.8197
Scale 8	Community Relations	.8553
Total Job Satisfaction		.9624

Comprehensive Test of Basic Skills

The Comprehensive Test of Basic Skills, Expanded Edition (CTB/McGraw-Hill, 1974) was selected to measure student achievement in mathematics and reading. The Level 2 battery in reading and mathematics corresponds to the 4.5-6.9 grade levels. Therefore, it was chosen as an appropriate standardized examination for students enrolled in the intermediate unit of an IGE school.

Table 4 shows the item and time limits for each test in reading and mathematics.

TABLE 4

NUMBER OF ITEMS AND TIME LIMITS BY SKILLS AREA AND TEST FOR CTBS/S, LEVEL 2*

Skills Area Test	Number of Items	Number of Minutes
Reading		
Vocabulary	40	14
Comprehension	45	35
Mathematics		
Computation	45	40
Concepts	25	35
Applications	25	

Note: Although mathematics concepts and applications are administered as one test, separate scores are reported for them.

The CTBS/S is a standardized test which provides national and large city norms based on a sample of the entire school population. The sample includes approximately 150,000 students enrolled in public and parochial schools in grades K through 12 (CTB/McGraw(b), 1974, p. 59). In 1972 and 1973, the tests were administered to this sample according to geographic region, average enrollment per grade, and community type to obtain a representative sample for national norming and to reduce variability.

The publishers have attempted to eliminate racial, cultural, and ethnic bias using two techniques. First, sampling techniques provided for proportionate sampling of minority groups. Second, members of minority groups with pedogical expertise examined the test for content bias (CTB/McGraw Hill(b), 1974, p. 14).

Recent revisions of the CTBS, Expanded Edition, include new items reflecting current trends in the curriculum. In addition, these tests are intended for use by students who have been taught using a variety of methodological approaches.

The determination of reliability coefficients for each level tested was determined by use of the Kuder-Richardson Formula 20 and ranges for total reading and total mathematics, between .94 and .97 (CTB/McGraw(c), 1974, p. 41).

The final validity of this test must be determined within the context of the objectives and curriculum of the school. As noted by Sigurdson (1976), the emphasis of these tests is on the measurement of the grasp of broad concepts and abstractions, as developed by the curriculum. The scheme, according to the publisher, is so arranged that there is an inherent hierarchy of skills and levels of thinking consistent with what is currently known about child development, cognitive structure, and learning process.

Self Observation Scales (SOS)

Student affective behavior was measured by the Intermediate Level, Form C, of the Self Observation Scales (SOS), developed by

Katzenmeyer and Stenner (1973), which is a direct, self report, yes-no response format, group administered instrument comprised of sixty items for use at the intermediate level (4-6). The test measures the way in which children perceive themselves and their relationships to peers, teachers, and school.

National norming of this instrument began with 450 items including students of 1200 teachers in 150 schools for a total sample size of over 30,000 children in grades K-6 (Katzenmeyer and Stenner, 1973, p. 4). The items responses from this norming project were analyzed using factor analysis which determined the final form of the primary and intermediate levels. A seven-factor solution at the intermediate level was computed including: (1) Self Acceptance, (2) Self Security, (3) Social Maturity, (4) Social Confidence, (5) School Affiliation, (6) Teacher Affiliation, (7) Peer Affiliation.

Factor analytic procedures were applied to determine the replicability of the dimensions. Katzenmeyer and Stenner (1975) reported the following results of the split-half replicability for the intermediate level of the Self Observation Scales (SOS): Self Acceptance .85; Self Security .81; Social Maturity .80; Social Confidence .73; School Affiliation .79; Teacher Affiliation .74; and Peer Affiliation .85.

Content validity was determined to investigate whether the factor structure was the same across race and sex. The magnitude of the coefficients of replicability and coefficients of invariance for both the primary and intermediate versions suggests that the factor

structure underlying the SOS is both replicable and invariant across race and sex (1976), socioeconomic status (1976), reading achievement (1976), and classroom behavior (1975). Katzenmeyer and Stenner (1973, p. 7), concluded that inferences can be drawn from differences in scores with confidence that similar psychological constructs are being measured across the criterion groups mentioned.

The Intermediate Level of the Self Observation Scales measures seven dimensions of children's self-concept. Each is labeled in a positive manner with high scores being most characteristic of the label. A description of each of the seven intermediate factors are presented below (Katzenmeyer and Stenner, Test Manual, pp. 10-12).

SCALE I - SELF ACCEPTANCE

> Children with high scores view themselves positively and attribute to themselves qualities of happiness, importance, and general competence, they see themselves as being valued by peers, family and teachers. Children with low scores see themselves as unhappy, lacking in competence and of little importance to others. Three items highly related to this scale are: I am a good person (.71); I am a happy person (.52); I am fun to be with (.47).

SCALE II - SELF SECURITY

> Children with high scores report a high level of emotional confidence or stability. They feel that they are in reasonable control of the factors that affect their lives and spend little time worrying over possible trouble. Children with low scores on this scale worry a great deal. They are concerned that something bad may happen and report feelings of nervousness. Three items highly related to this scale are: I worry quite a bit over possible troubles (-.63); I am a very nervous person (-.43); I often feel angry for no special reason (-.39).

SCALE III - SOCIAL MATURITY

Children with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They have learned the importance of such notions as "fair play," "sharing," "perserverance," "helpfulness," and "generosity". Children with low scores on this scale have not learned these notions and are likely to evidence behaviors that most adults would characterize as selfish, inconsiderate, or immature. Three items highly related to this scale are: I like to play only when I am a leader (-.51); I always have to be boss (-.46); I like to see other children happy (.31).

SCALE IV - SOCIAL CONFIDENCE

Children with high scores on this scale feel confident of their ability to relate successfully in social situations. They feel confident that they can make friends easily and that they are valued and enjoyed by their friends. Children with low scores have difficulty making friends, do not feel valued by others and see other people as being more socially adept than themselves. Three items highly related to this scale are: People are always picking on me (-.71); other children are often mean to me (-.59); my classmates like me (.56).

SCALE V - SCHOOL AFFILIATION

Children with high scores view school as a positive influence in their lives. They enjoy going to school, and they enjoy the activities associated with school. Children with low scores view school as an unhappy place to be. They do not enjoy most school related activities and are negative about the importance of school in their lives. Three items highly related to this scale are: I like to stay home from school (-.65); Each morning I look forward to coming to school (.15); I feel good when I am at school (.44).

SCALE VI - TEACHER AFFILIATION

Children with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Children with low scores see the teacher as arbitrary, inconsiderate of children, and/or a source of emotional pain. Three items highly related to this scale are:

I like my teachers (.74); my teachers like to help me (.72); my teachers are mean (-.68).

SCALE VII - PEER AFFILIATION

Children with high scores on this scale consider their relationships with other children to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other children. Children with low scores do not see their peer relationships as an asset They see other children as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily. Three items highly related to this scale are: I don't have many friends (-.58); the other children in my class are not friendly toward me (-.48); I don't like most of the children in my class (-.48).

Population and Sample Selection

The population for this study included all multiunit IGE schools listed in the Wisconsin Research and Development Center Directory, 1973-74. These schools numbered 959 and had been implementing IGE for two years or more. The 959 identified schools were numbered and placed in a program for generating random numbers (APL, 1972). Stratified random sampling procedures were used to guarantee urban representation. The schools were stratified "city" and "other" according to population. According to the 1970 census, "city" was defined as an urban area with a population of 200,000 people or greater, while "other" was defined as a community having a population under 200,000 people.

Each school was contacted by telephone in the order specified using a questionnaire until forty-one schools (including eight "city" schools and thirty-three schools in the "other" category) were found

which met the following operational criteria and agreed to participate: (Appendix E).

1. The MUS-E organizational criteria were:
   a. Multiunit organization and multi-age grading
   b. Weekly I&R unit meetings
   c. Unit leader has at least one year experience
   d. IIC meets at least two times a month
   e. At least one-half of the teachers have been in the unit
2. Minimal criteria for the Instructional Programming Model (IPM) in both reading and mathematics:
   a. Follow the IPM in reading for at least two years
   b. Follow the IPM model in mathematics for at least one year
3. An intermediate unit composed of children between the ages of nine and twelve years

Forty-one schools were chosen to complete the random sample because the number was sufficient for statistical analysis and was feasible in terms of resources. The distribution of the schools which participated in the study is shown in Table 5.

Within each of the forty-one schools an intermediate unit was identified for testing by the Computer Program IRANDX (Spuck and McIsaac, 1971). The children in each of the selected units were randomly divided into three groups (APL, 1972) and administered either the Intermediate Self Observation Scale (SOS) Form C, or the Reading or the Mathematics achievement section of the Comprehensive Test of Basic Skills (Form S).

TABLE 5

DISTRIBUTION BY STATE OF SCHOOLS
PARTICIPATING IN THE STUDY

California - 3	Ohio - 7
Colorado - 5	South Carolina - 1
Connecticut - 2	South Dakota - 1
Illinois - 2	Texas - 5
Nebraska - 1	Utah - 1
New Jersey - 2	Wisconsin - 10
New York - 1	

Procedures for Data Collection

Principals of schools that met the criteria and agreed to participate were sent information concerning the study. The R-3 Research Project-General Information Sheet (Appendix F) provided a background of the studies, a description of the instruments, research procedures, and the purpose of the research. This information was followed by a statement of the Procedural Details (Appendix G). This letter requested information about students which enabled the researchers to randomize the unit into three groups and permitted the researchers to place student data on the test reponse sheet before the on-site visit to the school. This letter also described the procedures that would be used when the researchers arrived at the school to collect the data. Teacher instruments were sent to the schools approximately a month

before the on-site visit so they could be completed prior to the day of testing. Four researchers from the Wisconsin R&D Center visited the schools in January and February, 1976. On the day that the researcher arrived, he/she met with the principal, I&R Unit staff, collected the completed respondent instruments, and finalized plans for the student testing procedures (See Appendix H). The researcher then worked with the staff in administering the tests to the students.

Participants in the study were assured that the responses were confidential and that individual staff and student responses would not be revealed. It was assured that the names of schools or participants would remain as part of the confidential data base for this study. The researchers, through communication and on-site visitation expressed appreciation to the administration, staff, and students for the effort made to complete the instruments and participate in the tests.

Statistical Analysis

Extent of involvement in and satisfaction with decision making was measured by the Decision Involvement Analysis (DIA) questionnaire; teacher job satisfaction was measured by the Teacher Job Satisfaction survey. Student achievement in reading and mathematics was measured by the reading and mathematics section of the Comprehensive Test of Basic Skills (CTB/McGraw Hill, 1974). Student affective behavior was measured by the Self Observation Scales (SOS) (Katzenmeyer and Stenner, 1973).

Because the unit of analysis for this study was an I&R unit, mean scores were compiled for all staff and student responses. Unit

leaders were included in all composite unit scores along with other teachers. Scale scores and total scores on a unit basis were derived for the Decision Involvement Analysis questionnaire and the Teacher Job Satisfaction survey. In addition, unit means scores were computed for student achievement in mathematics and reading. Scaled mean scores were derived for Student Self Observation (SOS); however, a total for the test was not computed. A summary of the instruments, respondents, and scoring is depicted in Table 6.

The hypotheses posited in this study were tested by determining the Pearson Product Moment Coefficients of Correlation. This analysis was calculated using PROGRAM WISE&STAT.DISTX (Spuck, Stofflet, and Fleckenstein, 1971), a program developed at the University of Wisconsin-Madison. A multivariate approach was employed by this researcher to specifically determine the relationship of the various scales of the independent variables to the various scales of the dependent variables.

Multiple regression analysis was utilized to determine the contribution of the two independent variables in relationship to the dependent variables. The combined and separate subscales of involvement in and satisfaction with decision making were entered into the procedure with combined and separate scales of the dependent variables including teacher job satisfaction, student achievement in mathematics and reading, and student self concept. This analysis was conducted, utilizing PROGRAM STEPREG1 (Allen, 1973), a University of Wisconsin-Madison computer program for multiple regression analysis. A .05 level of

TABLE 6

SUMMARY OF INSTRUMENTATION, RESPONDENTS AND SCORING

UNIT A	DECISION INVOLVEMENT	SATISFACTION WITH DECISION MAKING	TEACHER JOB SATISFACTION	STUDENT ACHIEVEMENT-READING	STUDENT ACHIEVE-MENT MATH	STUDENT SELF OBSERVATION
Teacher 1	X	X	X			
Teacher 2	X	X	X			
Teacher 3	X	X	X			
Teacher 4	X	X	X			
Unit Leader	X	X	X			
*Student Group A				X		
*Student Group B					X	
*Student Group C						X

Unit leaders were included in all unit scores along with other teachers.
Subscale scores and total unit means were calculated for Decision Involvement, Satisfaction with decision making, and Teacher Job Satisfaction
Total unit mean and subscale scores were calculated for Student achievement in reading and mathematics.
Scale scores were derived for Student Self Observation (SOS) but no total unit mean was calculated.

confidence was used to determine the statistical significance of the correlations. In addition, PROGRAM MINITAB (Ryan, 1975) was used to present visually the patterns of correlations of the variables.

CHAPTER III

ANALYSIS OF THE DATA

This chapter consists of three sections. The first section includes a discussion of the scoring, coding, and transforming of the data. The second section discusses the statistical tests utilized. The third section presents the results of the correlation and multiple regression analyses which were used to test the hypothesized relationship of teachers' perceptions of involvement in and satisfaction with decision making to a set of multiple effectiveness criteria.

Scoring, Coding, and Transforming Data

A series of data processing procedures were followed before the responses from the questionnaires and results of the tests could be analyzed statistically. Figure 8 illustrates the procedures utilized to process the data. First, the Decision Involvement Analysis Questionnaire and the Teacher Job Satisfaction Survey were examined for spurious markings. Answer sheets of the Comprehensive Test of Basic Skills (CTBS) and Self Observation Scales (SOS) were sent to the respective test centers for scoring. Second, each of the instruments was assigned a school number, study number, instrument number, respondent number, card number and teacher number. Third, the item responses of the instruments were keypunched on computer cards.

Next, all of the data on the cards were transferred to image arrays in files to facilitate analysis when compositing the data. Second, Program TSTAT (Spuck, Stofflet, and Fleckenstein, 1971) was employed to determine the internal reliability of the instruments.

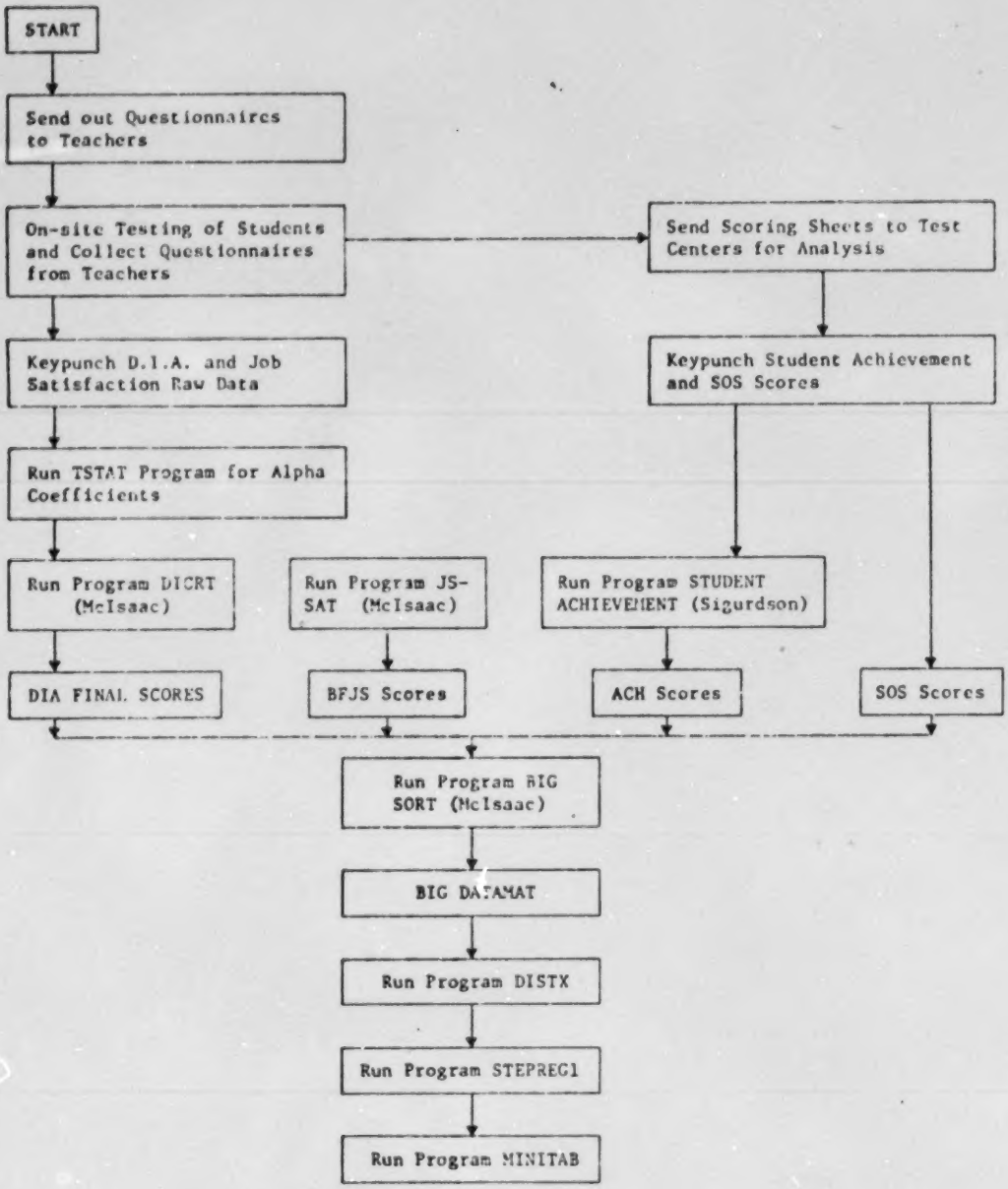

START
Send out Questionnaires to Teachers
On-site Testing of Students and Collect Questionnaires from Teachers
Send Scoring Sheets to Test Centers for Analysis
Keypunch D.I.A. and Job Satisfaction Raw Data
Keypunch Student Achievement and SOS Scores
Run TSTAT Program for Alpha Coefficients
Run Program DICRT (McIsaac)
Run Program JS-SAT (McIsaac)
Run Program STUDENT ACHIEVEMENT (Sigurdson)
DIA FINAL SCORES
BFJS Scores
ACH Scores
SOS Scores
Run Program BIG SORT (McIsaac)
BIG DATAMAT
Run Program DISTX
Run Program STEPREG1
Run Program MINITAB

Figure 8--Data Processing Procedures

Third, Program DICRT (McIsaac, 1976), a computer program written by Professor Donald N. McIsaac, composited unit mean scaled scores for involvement in and satisfaction with decision making, the independent variables of this study. The program also composited questions one and two of the Decision Involvement Analysis Questionnaire which were used as a measure of complexity in the companion study by Mendenhall (1976). Next, Program JS-SAT (McIsaac, 1976), composited unit mean scaled scores for the Teacher Job Satisfaction Survey. Also, student achievement scores in reading and mathematics were converted to unit mean scores. For a further explanation of this procedure see the companion study by Sigurdson (1976). No additional statistical procedures were necessary for the scores of the Self Observation Scales (SOS).

The final step of the data processing procedure was sorting of the unit mean scores for each of the instruments used in the study. A sort procedure, Program BIGSORT (McIsaac, 1976), was employed to develop a data file BIGDATAMAT, which facilitated the analysis of the data. The data matrix used for this study consisted of extent of involvement in and satisfaction with decision making, the independent variables, each of which have three scales and a total (8 scores); the dependent variables including teacher job satisfaction had eight scales and a total (9 scores); student achievement in reading had two scales and a total (3 scores); student achievement in mathematics had three scales and a total (4 scores), and student affective behavior had seven scales (7 scores).

The variables used in this study are as follows:

1. Self Acceptance - Self Observation Scale - Unit Mean
2. Self Security - Self Observation Scale - Unit Mean
3. Social Maturity - Self Observation Scale - Unit Mean
4. Social Confidence - Self Observation Scale - Unit Mean
5. School Affiliation - Self Observation Scale - Unit Mean
6. Teacher Affiliation - Self Observation Scale - Unit Mean
7. Peer Affiliation - Self Observation Scale - Unit Mean
8. Vocabulary - CTBS - Unit Mean
9. Comprehension - CTBS - Unit Mean
10. Total Student Achievement - Reading - CTBS - Unit Mean
11. Computation - CTBS - Unit Mean
12. Concepts - CTBS - Unit Mean
13. Applications - CTBS - Unit Mean
14. Total Student Achievement - Mathematics - CTBS - Unit Mean
15. Scale 1 - Administration - Teacher Job Satisfaction - Unit Mean
16. Scale 2 - Co-Worker - Teacher Job Satisfaction - Unit Mean
17. Scale 3 - Career Future - Teacher Job Satisfaction - Unit Mean
18. Scale 4 - School Identification - Teacher Job Satisfaction - Unit Mean
19. Scale 5 - Financial - Teacher Job Satisfaction - Unit Mean
20. Scale 6 - Working Conditions - Teacher Job Satisfaction - Unit Mean
21. Scale 7 - Pupil Relations - Teacher Job Satisfaction - Unit Mean
22. Scale 8 - Community Relations - Teacher Job Satisfaction - Unit Mean
23. Scale 9 - Total Teacher Job Satisfaction - Unit Mean

24. Scale 1 - Extra School - Decision Involvement - Unit Mean
25. Scale 2 - School Wide - Decision Involvement - Unit Mean
26. Scale 3 - Unit Wide - Decision Involvement - Unit Mean
27. Total Decision Involvement - Unit Mean
28. Scale 1 - Extra School - Satisfaction with Decision Making - Unit Mean
29. Scale 2 - School Wide - Satisfaction with Decision Making - Unit Mean
30. Scale 3 - Unit Wide - Satisfaction with Decision Making - Unit Mean
31. Total Satisfaction with Decision Making - Unit Mean

Preliminary Analysis

The Decision Involvement Analysis Questionnaire and the Teacher Job Satisfaction Survey were analyzed by Program TSTAT (Spuck, 1967) which produced the alpha-coefficients of internal consistency. A summary of the alphas is presented in Table 7. As discussed in Chapter II, the scores were adequate for the purposes of this study.

Item Response Distribution

The distribution of item patterns for extent of involvement are presented in Table 8. Distributions of item responses for extent of involvement demonstrate that generally, more items were positively skewed than were negatively skewed. A larger percentage of responses were at the first level of the response set for extent of

TABLE 7

ALPHA COEFFICIENTS OF INTERNAL CONSISTENCY

	Scale 1	Scale 2	Scale 3	Scale 4	Scale 5	Scale 6	Scale 7	Scale 8	Total
Decision Involvement	.7515	.6845	.6879	—	—	—	—	—	.8181
Satisfaction With Decision Making	.7669	.7235	.7025	—	—	—	—	—	.8857
Teacher Job Satisfaction	.9499	.8608	.8092	.8836	.9250	.8837	.8197	.8553	.9624

TABLE 8

ITEM CHOICE DISTRIBUTIONS AS PERCENTAGES
FOR EXTENT OF INVOLVEMENT

Item	Zero	Response Levels				
		1	2	3	4	5
1	1	12	13	32	34	8
2	2	19	13	30	28	7
3	1	47	16	19	8	10
4	2	20	15	36	21	7
5	3	29	16	35	12	5
6	1	40	9	27	15	8
7	2	81	11	4	0	1
8	1	5	2	12	31	49
9	4	15	10	22	26	23
10	2	54	18	20	4	2
11	3	40	17	30	5	3
12	5	38	17	26	10	4
13	8	44	13	23	38	3
14	4	34	15	29	10	8
15	4	18	6	20	30	23
16	3	6	4	20	30	34
17	4	41	24	22	11	4
18	4	58	13	16	7	2
19	4	47	22	21	3	3

involvement than at the fourth or fifth level. Level one of the response set was "very little involvement," level four was "much involvement" and level five was "very much involvement." Of particular interest are items eight and sixteen which were markedly negative in skew with a smaller percentage falling at the level of "very little involvement." Items eight and sixteen were scale three items of a unit wide nature which concerned the grouping to be utilized for instruction and the specific instructional objectives each child is to attain.

Table 9 presents the choice distribution for the second independent variable, Satisfaction with Decision Making. The distribution patterns for the item choices for this variable were similar as for extent of involvement. Items eight and sixteen were also negative in skew with a smaller percentage falling at the level of "not satisfied."

Test Statistics

The output of program TSTAT includes a table showing item correlations to total instrument and to scale scores. Tables 10 and 11 present the statistics for the independent variables. Generally, items correlated more strongly to scale than to total instrument.

Table 12 presents the descriptive statistics of the independent variables including the mean, standard deviations, skew, probability of skew, kurtosis, and probability of kurtosis for each of the variables.

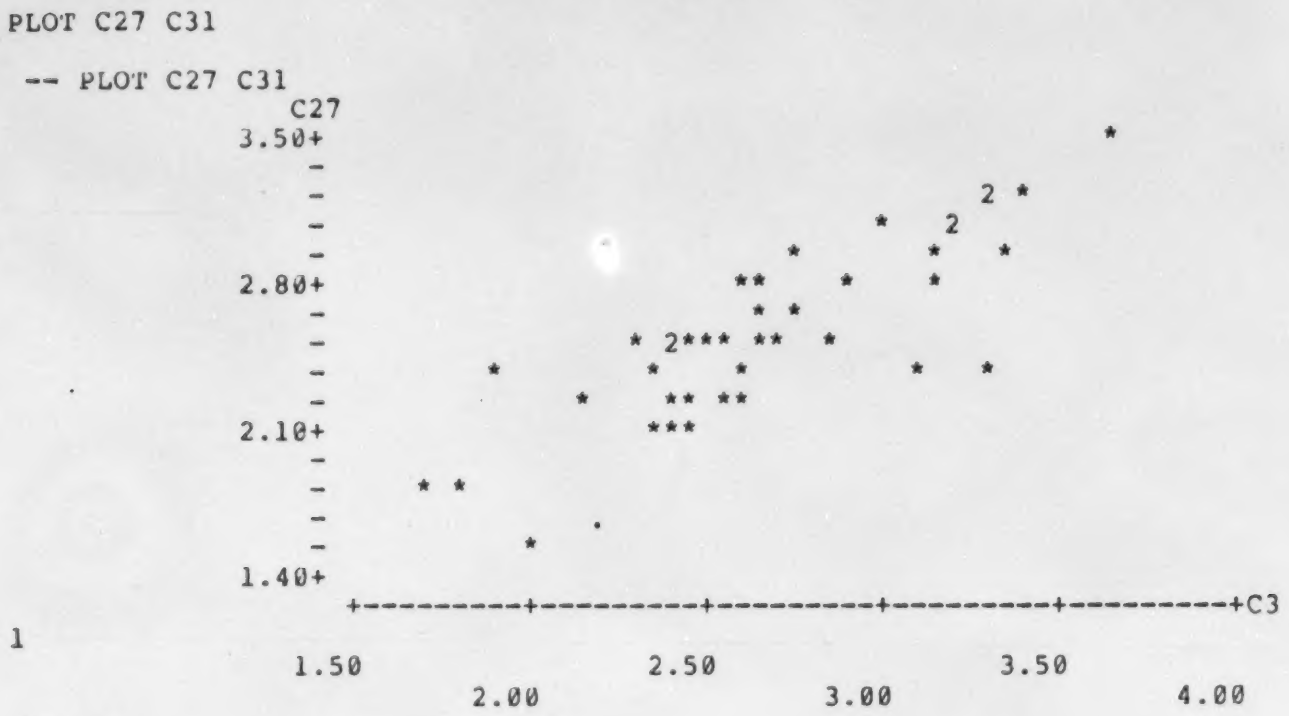
TABLE 9

ITEM CHOICE DISTRIBUTIONS AS PERCENTAGES
SATISFACTION WITH DECISION MAKING

Item	Zero	Response Levels				
		1	2	3	4	5
1	1	20	21	21	24	13
2	2	27	21	21	23	6
3	1	43	21	19	6	10
4	2	19	22	34	15	8
5	3	28	22	29	11	6
6	1	27	20	26	15	12
7	2	41	24	26	4	2
8	1	4	7	16	28	25
9	4	13	21	21	21	19
10	2	28	33	28	4	4
11	4	33	22	33	6	2
12	5	24	29	25	14	4
13	8	18	15	38	15	6
14	4	30	18	27	11	10
15	4	13	12	20	26	24
16	3	8	7	22	31	28
17	3	25	21	32	13	6
18	4	58	13	6	7	2
19	4	47	22	21	3	3

FIGURE 9

CORRELATION BETWEEN TOTAL DECISION INVOLVEMENT AND
TOTAL SATISFACTION WITH DECISION MAKING
(N=41)



Corr C^{27} F^{31} 830

Note: C^{27} = Total Decision Involvement

C^{31} = Total Satisfaction with Decision Making

TABLE 10

ITEM CORRELATIONS TO TOTAL AND SCALE DECISION INVOLVEMENT

Item	Scale	R(Total)	R(Scale)
1	2	.3315	.6349
2	2	.5201	.6816
3	2	.6150	.4192
4	2	-.0163	.3163
5	2	.0541	.0869
6	2	.0277	.2821
7	1	.0669	.1760
8	3	.6064	.8758
9	3	.6657	.8528
10	1	-.2825	-.1592
11	1	.3223	.2628
12	1	.3967	.3156
13	1	.6104	.5152
14	1	.3391	.5840
15	3	.7296	.8582
16	3	.6820	.8610
17	1	.3837	.3870
18	1	.0033	.4091
19	1	.1492	.0555

TABLE 11

ITEM CORRELATIONS TO TOTAL AND SCALE
SATISFACTION WITH DECISION MAKING

Item	Scale	R(Total)	R(Scale)
1	2	.5701	.6700
2	2	.5465	.6651
3	2	.5022	.5742
4	2	.4976	.6965
5	2	.5581	.6843
6	2	.4667	.6116
7	1	.3854	.5501
8	3	.5417	.6995
9	3	.5310	.7084
10	1	.5569	.5879
11	1	.5510	.6752
12	1	.5581	.6419
13	1	.5053	.5205
14	1	.5982	.6591
15	3	.5806	.7263
16	3	.4934	.7791
17	1	.6239	.6937
18	1	.3516	.5109
19	1	.3487	.4704

TABLE 12

DESCRIPTIVE STATISTICS OF SAMPLE DISTRIBUTION
INDEPENDENT VARIABLES

Variable Name	Mean	Standard Deviation	Skew	Probability of Skew	Kurtosis	Probability of Kurtosis
Decision Involvement Extra School	1.9598	.4606	.9085	.6331	.1101	.9086
Decision Involvement School Wide	2.6437	.5174	-.7771	.5565	-.2594	.7914
Decision Involvement Unit Wide	3.7341	.6353	-.3673	.7147	-1.2214	.2198
Decision Involvement Total	2.5495	.4193	.2487	.7992	-.3090	.7556
Satisfaction With Decision Making Extra School	2.3705	.5232	-.3047	.7587	-.6225	.5411
Satisfaction With Decision Making School Wide	2.5654	.5464	.2973	.7640	-.4990	.6240
Satisfaction With Decision Making Unit Wide	3.5544	.6347	.2257	.8164	-.9147	.6365
Satisfaction With Decision Making Total	2.6815	.4596	.1576	.8694	-.6477	-.5246

Table 13 illustrates the intercorrelations between extent of involvement in and satisfaction with decision making, the independent variables. All of these correlations were found to be positive and significant at the .05 level. It is of interest to note the correlation between decision involvement and satisfaction with decision making. Program MINITAB, (Ryan, Joiner, Ryan, 1974), a statistical computing system which presents a scattergram diagram of the correlations of an independent variable against a dependent variable was used to study the correlational relationships among the variables. Figure 9 illustrates the relationship between the independent variables, extent of involvement in and satisfaction with decision making. The correlation between these variables was .830 with a statistically significant level of .000. The scattergram revealed a linear rather than curvilinear relationship. Table 14 presents the descriptive statistics for the dependent variables including the mean, standard deviation, skew, probability of skew, kurtosis, and probability of kurtosis.

Correlation and Multiple Regression Analysis

A major purpose of this study was to analyze the relationship between the unit teachers' perceptions of the extent of involvement in and satisfaction with the decision making process in school and staff job satisfaction, student achievement in reading and mathematics, and student affective behavior. To accomplish this, eight major hypotheses, stated in null form, were tested:

TABLE 13

CORRELATIONS FOR THE INDEPENDENT VARIABLES

Variable Name	Mean	Standard Deviation	1	2	3	4	5	6	7	8
1 Decision Involvement Extra School	1.958	.4606	1.000							
2 Decision Involvement School Wide	2.6437	.5174	.510*	1.000						
3 Decision Involvement Unit Wide	3.7341	.6353	.424*	.476*	1.000					
4 Decision Involvement Total	2.5495	.4193	.858*	.814*	.723*	1.000				
5 Satisfaction With Decision Making Extra School	2.3705	.5232	.743*	.349*	.400*	.647*	1.000			
6 Satisfaction With Decision Making School Wide	2.5654	.5464	.491*	.858*	.477*	.742*	.541*	1.000		
7 Satisfaction With Decision Making Unit Wide	3.5544	.6347	.481*	.367*	.863*	.670*	.507*	.464*	1.000	
8 Satisfaction With Decision Making Total	2.6815	.4596	.723*	.625*	.650*	.830*	.890*	.806*	.739*	1.000

*Significant at the .05 level

TABLE 14

DESCRIPTIVE STATISTICS OF SAMPLE DISTRIBUTION
DEPENDENT VARIABLES

Variable Name	Mean	Standard Deviation	Skew	Probability of Skew	Kurtosis	Probability of Kurtosis
Self Observation Scales						
Self Acceptance	5098.9024	297.2756	-1.6770	.0898	-.7440	.5362
Self Security	4929.8536	220.5212	1.6759	.0900	.2193	.8211
Social Maturity	4958.2682	416.9384	-3.6323	.0006	2.1138	.0326
Social Confidence	5404.0000	307.1729	-.3213	.7470	-1.3696	.1675
School Affiliation	5240.8292	329.9309	.9489	.6551	-.8880	.6216
Teacher Affiliation	5061.5121	328.8313	-2.1478	.0300	.2424	.8038
Peer Affiliation	4997.7805	306.4996	-1.1046	.2688	-.5874	.5643
Student Achievement						
Vocabulary	50.6013	5.8552	-1.7053	.0845	-.2668	.7860
Comprehension	50.8506	6.3338	.8477	.5985	2.8584	.0046
Total Reading	50.9770	6.8159	.6761	.5064	2.5778	.0098
Computation	50.0654	.2418	.2418	.8043	-.2246	.8172
Concepts	50.0844	4.5390	.0890	.9265	-.1124	.9066
Applications	50.4920	5.1605	.1231	.8977	-.8696	.6112
Total Mathematics	50.3710	5.2290	.3337	.7382	-.1171	.9027

TABLE 14 (continued)

Variable Name	Mean	Standard Deviation	Skew	Probability of Skew	Kurtosis	Probability of Kurtosis
Teacher Job Satisfaction						
Administration	3.5744	.6688	-.1056	.9124	-.9623	.6623
Co-worker	2.9924	.4077	-1.0675	.2858	.7998	.5702
Career Future	3.5827	.5628	-.3136	.7524	-.2252	.8167
School Identification	3.3983	.5139	-1.1365	.2547	.0669	.9451
Financial	3.2032	.6148	-.0910	.9248	2.4304	.0145
Working Conditions	3.4785	.4499	-.7072	.5133	-.8422	.5954
Pupil Relations	3.1522	.4155	.0506	.9585	-.9408	.6507
Community Relations	2.2659	.4707	.3150	.7514	.2128	.8261
Total Job Satisfaction	3.3922	.4279	-.6579	.5180	-.5881	.5638

1. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and teacher job satisfaction.

2. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in reading.

3. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in mathematics.

4. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student affective behavior.

5. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and teacher job satisfaction.

6. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in reading.

7. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in mathematics.

8. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student affective behavior.

The correlation of each of the independent variables and the dependent variables was computed through use of PROGRAM WISE*STAT.DISTX (Spuck, et al., 1971). The computed correlation matrix for Teacher

TABLE 15

CORRELATIONS BETWEEN DEPENDENT VARIABLES OF TEACHER JOB SATISFACTION AND INDEPENDENT VARIABLES OF INVOLVEMENT IN AND SATISFACTION WITH DECISION MAKING

Dependent Variables Teacher Job Satisfaction	Decision Involvement Extra School	Decision Involvement School Wide	Decision Involvement Unit Wide	Decision Involvement Total	Satisfaction With Decision Making Extra School	Satisfaction With Decision Making School Wide	Satisfaction With Decision Making Unit Wide	Satisfaction With Decision Making Total
Administration	.485* (.002)	.315* (.042)	.491* (.001)	.536* (.001)	.644* (.000)	.378* (.014)	.517* (.001)	.644* (.000)
Co-worker	.160 (.318)	-.009 (.954)	.301 (.053)	.176 (.269)	.427* (.005)	.100 (.539)	.369* (.017)	.378* (.014)
Career Future	.344* (.026)	.386 (.066)	.586* (.000)	.479* (.002)	.484* (.002)	.426* (.006)	.564* (.000)	.590* (.000)
School Identification	.479* (.002)	.333* (.032)	.574* (.000)	.565* (.000)	.611* (.000)	.432* (.005)	.554* (.000)	.659* (.000)
Financial	.376* (.015)	.142 (.620)	.191 (.229)	.317* (.041)	.612* (.000)	.277* (.077)	.280 (.072)	.522* (.001)
Working Conditions	.381* (.013)	.373* (.016)	.445* (.004)	.491* (.001)	.565* (.000)	.455* (.003)	.495* (.001)	.628* (.000)
Pupil Relations	.411* (.008)	.427* (.005)	.477* (.002)	.521* (.001)	.525* (.001)	.521* (.001)	.463* (.003)	.618* (.000)
Community Relations	.426* (.006)	.415* (.007)	.478* (.002)	.533* (.001)	.653* (.000)	.601* (.000)	.485* (.002)	.720* (.000)
Total/Teacher Job Satisfaction	.504* (.001)	.389* (.012)	.579* (.000)	.602* (.000)	.721* (.000)	.512* (.001)	.607* (.000)	.764* (.000)

Note: Exact probabilities levels in parentheses
*Significant at .05 level

Job Satisfaction is presented in Table 15; for Student Achievement in reading and mathematics, is presented in Table 25, and for Student affective behavior is presented in Table 33.

A multiple linear regression procedure was employed to further test the hypotheses and analyze the individual and combined effects of the set of independent variables on the dependent variables. These techniques were performed using PROGRAM STEPREG1 (Allen, 1973), a University of Wisconsin computer program for conducting regression analysis. A regression model was generated for relating all the independent variables to each dependent variable. All of the independent variables were designated as free variables and were regressed on the dependent variable employing a forward selection procedure. The program using the forward selection procedure selects the independent variable which has the highest correlation with the dependent variable. The regression model using only this one independent variable is then determined. Successive independent variables are chosen whose partial correlation with the dependent variable, given the variable already in the equation, is the highest. This procedure is continued until all of the independent variables have been included in the model.

The regression tables presented in this study include the following statistics. First, the name of the independent variable entered into the regression equation. Second, the F-ratio and the significance level of F-ratio. Third, the multiple correlation coefficient, which is a measure of the strength of the linear relation-

ship between the dependent variable and all the independent variables in the equation. Fourth, the coefficient of determination (or R-squared), the square of the multiple correlation coefficient, which is the percent of the total variation of the dependent variable explained by all of the independent variables currently in the equation. Fifth, the significance level, which gives the value at which the variable entered the equation at the specific step.

An asterisk indicates statistically significant relationships between the dependent variable and the independent variable. The .05 level of significance was utilized for the correlation and multiple regression analysis.

Decision Making and Job Satisfaction

To test Hypotheses One and Five, the unit teachers' scores on the two independent variables (involvement in and satisfaction with decision making) and the dependent variable (teacher job satisfaction) were analyzed to show their correlations and their significance levels. Also included in the analysis were scale scores for the independent and dependent variables.

Table 15 shows the correlational matrix for the independent variable, involvement in decision making, and the dependent variable, teacher job satisfaction. The correlations between unit teachers' perceptions of involvement in decision making (unit wide, school wide, extra school, and total) and teacher job satisfaction including administration, career future, school identification, working conditions, pupil relations, community relations, and total job satisfaction were significant at the .05 level of confidence.

Correlations between the scales of involvement in decision making (unit wide, school wide, extra school, and total) and teacher job satisfaction (co-worker) were not statistically significant at the .05 level of confidence. Also the correlations between unit and school wide scales of involvement in decision making and teacher job satisfaction (financial) were not statistically significant at the .05 level of confidence.

Table 15 also shows the correlational matrix for the independent variable satisfaction with decision making and the dependent variable, teacher job satisfaction. The correlations between unit teachers' perceptions of satisfaction with decision making (unit wide, school wide, extra school, and total) and the scales of teacher job satisfaction were significant at the .05 level of confidence. The correlations of satisfaction with decision making (school wide) and teacher job satisfaction (co-worker) and satisfaction with decision making (unit wide) and teacher job satisfaction (financial) were not statistically significant at the .05 level. To further test the hypotheses, multiple regression analysis was employed.

Tables 16 through 25 illustrate the relationship between the scores of the independent variables of involvement in and satisfaction with decision making and the dependent variables of teacher job satisfaction.

Table 16 illustrates the relationship between the eight independent measures of involvement in and satisfaction with decision making and the dependent variable of teacher job satisfaction (administration). Over 54 percent of the variation was explained by the independent variables. Satisfaction with decision making (total and school wide) had the greatest impact on the dependent variable and was statistically significant at the .05 level.

Table 17 presents the relationship between the independent measures and the dependent variable of teacher job satisfaction (co-workers). The amount of variation explained by the independent variables was about 37 percent. Satisfaction with decision making (extra school) had the greatest influence on the dependent variable accounting for 18 percent variation. The significance level indicated that the relationship was statistically significant at the .05 level.

Table 18 depicts the relationship between the independent variables and the dependent variable of teacher job satisfaction (career future). About 48 percent of the variation was explained by the independent variables. Satisfaction with decision making (total) had the greatest influence on the dependent variable accounting for 35 percent. The significance level indicated that this relationship was statistically significant at the .05 level.

Table 19 illustrates the relationship between the independent variables and the dependent variable of teacher job satisfaction (school identification). The amount of variation explained by the independent measures was approximately 56 percent. Satisfaction with

TABLE 16

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-ADMINISTRATION
F-Ratio = 4.56 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0009

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.6442	.4150	.000*
2	Satisfaction With Decision Making School Wide	.6873	.4723	.049
3	Decision Involvement School Wide	.6963	.4848	.350
4	Decision Involvement Extra School	.7042	.4958	.381
5	Satisfaction With Decision Making Unit Wide	.7076	.5007	.563
6	Satisfaction With Decision Making Extra School	.7220	.5213	.235
7	Decision Involvement Total	.7264	.5277	.508
8	Decision Involvement Unit Wide	.7299	.5327	.563

* Significant at the .05 level

TABLE 17

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-CO-WORKERS
F-Ratio = 2.36 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0402

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Extra School	.4273	.1825	.005*
2	Decision Involvement Extra School	.4874	.2375	.106
3	Satisfaction With Decision Making Unit Wide	.5372	.2866	.112
4	Satisfaction With Decision Making School Wide	.5661	.3205	.202
5	Satisfaction With Decision Making Total	.6088	.3706	.104
6	Decision Involvement Total	.6092	.3711	.871
7	Decision Involvement Unit Wide	.6092	.3711	.987
8	Decision Involvement School Wide	.6093	.3713	.927

* Significant at the .05 level

TABLE 18

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-CAREER FUTURE
F-Ratio = 3.76 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0033

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.5892	.3472	.000*
2	Decision Involvement Unit Wide	.6470	.4186	.037
3	Decision Involvement Total	.6640	.4409	.232
4	Satisfaction With Decision Making Unit Wide	.6667	.4445	.633
5	Decision Involvement School Wide	.6700	.4489	.598
6	Decision Involvement Extra School	.6916	.4783	.176
7	Satisfaction With Decision Making Extra School	.6959	.4843	.539
8	Satisfaction With Decision Making School Wide	.6959	.4843	.978

* Significant at the .05 level

TABLE 19

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-SCHOOL IDENTIFICATION
F-Ratio = 4.99 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0005

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.6590	.4343	.000*
2	Decision Involvement Unit Wide	.6864	.4712	.112
3	Satisfaction With Decision Making Extra School	.7088	.5024	.136
4	Decision Involvement Extra School	.7098	.5039	.750
5	Satisfaction With Decision Making Unit Wide	.7107	.5051	.771
6	Satisfaction With Decision Making School Wide	.7429	.5519	.068
7	Decision Involvement School Wide	.7446	.5545	.664
8	Decision Involvement Total	.7451	.5551	.832

* Significant at the .05 level

decision making (total) had the greatest impact on the dependent variable accounting for 43 percent variation with a statistically significant level of .000.

Table 20 presents the relationship between the independent variables and the dependent variable of teacher job satisfaction (financial). Approximately 51 percent of the variation of teacher job satisfaction (financial) was explained by the independent variables. Satisfaction with decision making (extra school) had the greatest influence upon the dependent variable accounting for 37 percent of the variation, which was statistically significant at the .05 level.

Table 21 illustrates the relationship between the independent variables and the dependent variable of teacher job satisfaction (working conditions). About 55 percent of the variation of teacher job satisfaction (working conditions) was accounted for by the independent variables. Satisfaction with decision making (total) had the most impact upon the dependent variable accounting for 39 percent of the variation. This relationship was statistically significant at .05 level.

Table 22 depicts the relationship between the independent measures and the dependent variable of teacher job satisfaction (pupil relations). Approximately 45 percent of the variation of teacher job satisfaction (pupil relations) was determined by the independent variables. Satisfaction with decision making (total) had the most influence on the dependent variable. The level of significance indicated that this relationship was statistically significant at the .000 level.

TABLE 20

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-FINANCIAL
F-Ratio = 4.12 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0018

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Extra School	.6121	.3747	.000*
2	Decision Involvement Extra School	.6234	.3886	.359
3	Satisfaction With Decision Making School Wide	.6251	.3908	.718
4	Satisfaction With Decision Making Total	.6260	.3919	.800
5	Satisfaction With Decision Making Unit Wide	.7068	.4995	.010
6	Decision Involvement Unit Wide	.7122	.5073	.469
7	Decision Involvement Total	.7125	.5077	.872
8	Decision Involvement School Wide	.7125	.5077	.787

* Significant at the .05 level

TABLE 21

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-WORKING CONDITIONS
F-Ratio = 4.97 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0005

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.6282	.3946	.000*
2	Decision Involvement Extra School	.6388	.4081	.358
3	Satisfaction With Decision Making School Wide	.6499	.4223	.346
4	Decision Involvement School Wide	.6661	.4437	.247
5	Satisfaction With Decision Making Unit Wide	.6682	.4465	.677
6	Satisfaction With Decision Making Extra School	.7407	.5486	.009
7	Decision Involvement Total	.7420	.5505	.709
8	Decision Involvement Unit Wide	.7445	.5543	.608

* Significant at the .05 level

TABLE 22

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-PUPIL RELATIONS
F-Ratio = 3.24 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0082

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.6179	.3819	.000*
2	Decision Involvement Unit Wide	.6259	.3918	.436
3	Satisfaction With Decision Making Unit Wide	.6337	.4015	.443
4	Decision Involvement Extra School	.6363	.4049	.656
5	Decision Involvement School Wide	.6363	.4049	.959
6	Satisfaction With Decision Making School Wide	.6366	.4053	.880
7	Satisfaction With Decision Making Extra School	6443	.4151	.461
8	Decision Involvement Total	.6689	.4474	.181

* Significant at the .05 level

Table 23 illustrates the relationship between the independent measures and the dependent variable of teacher job satisfaction (community relations). About 57 percent of the variation of teacher job satisfaction (community relations) was explained by the independent variables. Satisfaction with decision making (total) had the greatest impact on the dependent variable, at the .05 level of significance.

Table 24 presents the relationship between the independent variables and the dependent variable of total teacher job satisfaction. The amount of variation explained by the independent measures was about 71 percent. Again satisfaction with decision making (total) had the most influence on the dependent variable accounting for 58 percent of the variation. The significance test indicated that the relationship was statistically significant at the .05 level.

In summary, the correlations on the totals and scales, between involvement in decision making and teacher job satisfaction, and between satisfaction with decision making and teacher job satisfaction generally were significant at the .05 level of confidence. The analysis of the data for the nine regression models presented in Tables 16 through 24 demonstrated a statistically significant relationship between the dependent measures of teacher job satisfaction and the independent measure of satisfaction with decision making (total and extra school). Furthermore, the significance level of the F-ratio for each of the regression equations indicated that the independent variables were related to the dependent variable at the .05 level of significance. Because the data did demonstrate a statistically

TABLE 23

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-COMMUNITY RELATIONS
F-Ratio = 5.23 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0003

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.7198	.5182	.000*
2	Decision Involvement Extra School	.7351	.5404	.184
3	Satisfaction With Decision Making Unit Wide	.7403	.5481	.431
4	Decision Involvement Unit Wide	.7465	.5572	.394
5	Decision Involvement School Wide	.7520	.5655	.421
6	Satisfaction With Decision Making Extra School	.7523	.5660	.838
7	Decision Involvement Total	.7526	.5664	.861
8	Satisfaction With Decision Making School Wide	.7528	.5668	.872

*Significant at the .05 level

TABLE 24

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF JOB SATISFACTION-TOTAL
F-Ratio = 9.73 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0000

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Total	.7641	.5838	.000 *
2	Satisfaction With Decision Making School Wide	.7840	.6146	.089
3	Decision Involvement Extra School	.7946	.6313	.203
4	Decision Involvement Total	.8034	.6454	.240
5	Satisfaction With Decision Making Unit Wide	.8135	.6618	.201
6	Satisfaction With Decision Making Extra School	.8405	.7067	.029
7	Decision Involvement Unit Wide	.8418	.7086	.646
8	Decision Involvement School Wide	.8418	.7086	.994

* Significant at the .05 level

significant relation among the variables, null hypotheses One and Five were therefore rejected.

Decision Making and Reading Achievement

To test Hypotheses Two and Six, the unit teachers' scores on the two independent variables (involvement in and satisfaction with decision making) and the dependent variable (student achievement in reading) were analyzed to show their correlations and significance levels. Also included in the analysis were the scale scores for the independent variables.

Table 25 shows the correlational matrix for the independent variable involvement in decision making and the dependent variable, student achievement in reading. The correlation between unit teachers' perceptions of involvement in decision making (school wide, unit wide, and total) and student achievement in reading vocabulary were significant at the .05 level of confidence. The correlation between unit teachers' perceptions of involvement in decision making (school wide) and unit wide and student achievement in reading comprehension were significant at the .05 level of confidence. The correlation between the unit teachers' involvement in decision making (unit wide) and student achievement in total reading was significant at the .05 level of confidence. The remaining correlations of the matrix were not statistically significant at the .05 level.

Table 25 also shows the correlational matrix for the independent variable satisfaction with decision making and the dependent variable, student achievement in reading. The correlation between unit teachers' perceptions of satisfaction with decision making (unit wide) and reading

TABLE 25

CORRELATIONS BETWEEN DEPENDENT VARIABLES OF STUDENT ACHIEVEMENT SCORES AND INDEPENDENT VARIABLES OF INVOLVEMENT IN AND SATISFACTION WITH DECISION MAKING

Dependent Variables	Decision Involvement Extra School	Decision Involvement School Wide	Decision Involvement Unit Wide	Decision Involvement Total	Satisfaction With Decision Making Extra School	Satisfaction With Decision Making School Wide	Satisfaction With Decision Making Unit Wide	Satisfaction With Decision Making Total
Reading Vocabulary	.085 (.589)	.338* (.029)	.405* (.008)	.311* (.045)	.072 (.657)	.299 (.055)	.351* (.023)	.256 (.103)
Reading Comprehension	-.011 (.942)	.310* (.046)	.357* (.021)	.231 (.143)	.071 (.663)	.254 (.105)	.293 (.060)	.218 (.167)
Reading Total	-.007 (.964)	.302 (.052)	.350* (.024)	.227 (.149)	.056 (.727)	.250 (.111)	.287 (.065)	.207 (.192)
Math Computation	-.066 (.683)	.195 (.219)	.176 (.271)	.103 (.528)	-.098 (.548)	.168 (.294)	.084 (.605)	.037 (.812)
Math Concepts	.084 (.606)	.272 (.082)	.277 (.077)	.243 (.122)	.104 (.523)	.283 (.069)	.193 (.223)	.221 (.161)
Math Applications	.131 (.580)	.269 (.085)	.323* (.037)	.281 (.071)	.122 (.546)	.270 (.084)	.277 (.076)	.249 (.112)
Math Total	.026 (.866)	.230 (.145)	.223 (.157)	.180 (.259)	.009 (.156)	.213 (.177)	.147 (.637)	.130 (.575)

Note: Exact probabilities levels in parentheses
Significant at .05 level

vocabulary was significant at the .05 level of confidence. The other correlations of the matrix were not statistically significant at the .05 level of confidence.

Tables 26 through 28 illustrate the relationship between the scores of the independent variables of involvement in and satisfaction with decidion making and the dependent variables of student achievment in reading.

Table 26 illustrates the relationship between the eight independent measures of involvement in and satisfaction with decision making and the dependent variable of reading vocabulary. Over 16 percent of the variation in reading vocabulary was explained by the independent variables. Decision involvement (unit wide) had the greatest influence on the dependent variable, at the .009 level of significance.

Table 27 presents the relationship between the independent variables and the dependent variable of reading comprehension. Approximately 30 percent of the variation in reading comprehension was explained by the independent variables. Decision involvement (unit wide) again had the greatest influence. The level of significance indicated that this relationship was statistically significant at the .05 level.

Table 28 depicts the relationships between the independent variables and the dependent variable of total reading. About 28 percent of the variation of total reading was determined by the independent variables. Decision involvement (unit wide) also had the greatest influence upon the dependent variable and was statistically significant at the .05 level of significance.

TABLE 26

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF READING VOCABULARY
F-Ratio = 1.45 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .2156

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.4054	.1643	.009*
2	Decision Involvement School Wide	.4375	.1914	.226
3	Decision Involvement Extra School	.4689	.2199	.252
4	Decision Involvement Total	.4826	.2329	.440
5	Satisfaction With Decision Making Unit Wide	.4915	.2416	.530
6	Satisfaction With Decision Making Extra School	.4917	.2418	.927
7	Satisfaction With Decision Making School Wide	.4920	.2421	.913
8	Satisfaction With Decision Making Total	.5154	.2657	.318

*Significant at the .05 level

TABLE 27

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF READING COMPREHENSION
F-Ratio = 1.71 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .1332

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.3565	.1271	.022*
2	Decision Involvement Extra School	.3992	.1593	.235
3	Decision Involvement Total	.4723	.2231	.090
4	Satisfaction With Decision Making Extra School	.4821	.2324	.512
5	Satisfaction With Decision Making School Wide	.4936	.2436	.477
6	Satisfaction With Decision Making Unit Wide	.5021	.2521	.538
7	Satisfaction With Decision Making Total	.5173	.2676	.410
8	Decision Involvement School Wide	.5477	.3000	.232

*Significant at the .05 level

TABLE 28

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF READING TOTAL
F-Ratio = 1.56 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .1767

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.3498	.1223	.025*
2	Decision Involvement Extra School	.3895	.1517	.258
3	Decision Involvement Total	.4587	.2104	.106
4	Satisfaction With Decision Making Unit Wide	.4654	.2166	.599
5	Satisfaction With Decision Making Extra School	.4685	.2195	.718
6	Satisfaction With Decision Making Total	.4832	.2335	.437
7	Satisfaction With Decision Making School Wide	.4982	.2482	.427
8	Decision Involvement School Wide	.5295	.2804	.240

*Significant at the .05 level

In summary, the correlations on the totals and scales between involvement in decision making and student achievement in reading were significant at the .05 level of confidence. The correlations between satisfaction with decision making and student achievement in reading were not significant at the .05 level of confidence. The analysis of the data for the three regression models presented in Tables 26 through 28 demonstrated a statistically significant relationship between the dependent measure of student achievement in total reading and the independent measure of decision involvement (unit wide). However, the significance level of the F-ratio of each of the regression equations indicated the independent variables did not impact upon the dependent variable at the .05 level of significance. Therefore, because the data did not demonstrate a statistically significant relationship among the variables, null Hypotheses Two and Six were accepted.

Decision Making and Mathematics Achievement

To test Hypotheses Three and Seven, the unit teachers' perceptions on the two independent variables (involvement in and satisfaction with decision making) and the dependent variable (student achievement in mathematics) were analyzed to show their correlations and significance levels. Also included in the analysis were the unit teachers' scale scores for the independent variable.

Table 25 shows the correlational matrix for the independent variable involvement in decision making and the dependent variable, student achievement in mathematics. The correlations between the

unit teachers' perceptions of involvement in decision making (unit wide, school wide, extra school and total) and student achievement in mathematics computation, concepts, applications, and mathematics total were not significant at the .05 level. However, the correlation between unit teachers' perceptions of involvement in decision making (unit wide) and student achievement in math applications was significant at the .05 level of significance.

Table 25 also shows the correlational matrix for the independent variable satisfaction with decision making and the dependent variable, student achievement in mathematics. The correlations between unit teachers' perceptions of satisfaction with decision making (unit wide, school wide, extra-school, and total) and student achievement in mathematics including computation, concepts, applications and mathematics total were not significant at the .05 level of confidence.

Tables 29 through 32 illustrate the relationship between the scores of the independent variables of involvement in and satisfaction with decision making and the dependent variables of student achievement in mathematics.

Table 29 illustrates the relationship between the eight independent measures of involvement in and satisfaction with decision making and the dependent variable of mathematics computation. Over 16 percent of the variation of mathematics computation were explained by the independent variables. Decision involvement (school wide) had the greatest impact on the dependent variable, although this relationship was not at the .05 level of significance.

TABLE 29

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF MATHEMATICS COMPUTATION
F-Ratio = .78 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .6217

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement School Wide	.1953	.0381	.221
2	Decision Involvement Extra School	.2746	.0754	.223
3	Decision Involvement Total	.3189	.1017	.305
4	Decision Involvement Unit Wide	.3458	.1196	.398
5	Satisfaction With Decision Making School Wide	.3527	.1244	.663
6	Satisfaction With Decision Making Total	.3730	.1391	.451
7	Satisfaction With Decision Making Extra School	.3739	.1398	.875
8	Satisfaction With Decision Making Unit Wide	.4044	.1635	.348

Table 30 presents the relationship between the independent variables and the dependent variable of mathematics concepts. Approximately 21 percent of the variation of mathematics concepts was explained by the independent variables Satisfaction with decision making (school wide) had the most influence upon the dependent variable although this relationship was not statistically significant at the .05 level.

Table 31 depicts the relationship between the independent variables and the dependent variables of mathematics applications. About 23 percent of the variation of mathematics applications was explained by the independent variables. Decision involvement (unit wide) had the greatest impact upon the dependent variable and was statistically significant at the .05 level.

Table 32 illustrates the relationship between the independent variables and the dependent variables of mathematics total. The amount of variation explained by the independent measures was about 17 percent. The significance level indicated that the relationships between variables were not statistically significant at the .05 level.

In summary, the correlations based upon the totals and scales, between involvement in decision making and student achievement in mathematics were not significant at the .05 level of confidence. The correlations between satisfaction with decision making and student achievement in mathematics were not significant at the .05 level of confidence. Further analysis of the data for the 3 regression equations as shown in Tables 25 through 32 demonstrated a statistically significant relationship between the dependent measure of student achievement in mathematics applications and the independent measure of

TABLE 30

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF MATHEMATICS CONCEPTS
F-Ratio = 1.06 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .4136

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making School Wide	.2832	.0802	.073
2	Decision Involvement Unit Wide	.3257	.1061	.301
3	Satisfaction With Decision Making Unit Wide	.3437	.1182	.481
4	Decision Involvement Extra School	.3533	.1248	.685
5	Decision Involvement Total	.3563	.1270	.769
6	Decision Involvement School Wide	.3998	.1598	.257
7	Satisfaction With Decision Making Extra School	.3998	.1599	.963
8	Satisfaction With Decision Making Total	.4579	.2097	.165

130a

1306

TABLE 31

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF MATHEMATICS APPLICATIONS
F-Ratio = 1.17 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .3468

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.3233	.1045	.039*
2	Satisfaction With Decision Making School Wide	.3491	.1219	.391
3	Satisfaction With Decision Making Extra School	.3566	.1272	.637
4	Decision Involvement School Wide	.3572	.1276	.900
5	Decision Involvement Extra School	.3584	.1284	.852
6	Decision Involvement Total	.3991	.1593	.272
7	Satisfaction With Decision Making Total	.3994	.1595	.930
8	Satisfaction With Decision Making Unit Wide	.4757	.2263	.106

* Significant at .05 level

TABLE 32

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF MATHEMATICS TOTAL
F-Ratio = .85 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .5700

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement School Wide	.2295	.0527	.149
2	Decision Involvement Unit Wide	.2637	.0695	.412
3	Decision Involvement Extra School	.2990	.0894	.374
4	Decision Involvement Total	.3363	.1131	.334
5	Satisfaction With Decision Making School Wide	.3484	.1214	.568
6	Satisfaction With Decision Making Total	.3556	.1264	.661
7	Satisfaction With Decision Making Extra School	.3583	.1284	.787
8	Satisfaction With Decision Making Unit Wide	.4179	.1746	.190

Decision involvement (unit wide) at the .05 level. In addition, the significance level of the F-ratio of each of the regression equations indicated that the independent variables did not impact upon the dependent variables at the .05 level of significance. Therefore, because the data did not demonstrate a significant relation among the variables, the null Hypothesis Three was accepted and the null Hypothesis Seven was accepted.

Decision Making and Student Affective Behavior

To test Hypotheses Four and Eight, the unit teachers' perceptions on the two independent variables (involvement in and satisfaction with decision making) and the dependent variable (student affective behavior), as measured by the seven self observation scales, were analyzed to show their correlations and their significance levels. Also included in the analysis were the unit teachers' scale scores for the independent variable.

Table 33 shows the correlation matrix for the independent variable, involvement in decision making, and the dependent variable, student affective behavior. The correlations between involvement in decision making (unit wide) and the self observation scales (social maturity and teacher affiliation) were significant at the .05 level of confidence. Also, the correlation between involvement in decision making (total) and the self observation scale (self acceptance) was significant at the .05 level of significance.

Additional correlations between the subscales of involvement in decision making the the dependent variable, self observation scales were not significant at the .05 level of confidence.

TABLE 33

CORRELATIONS BETWEEN DEPENDENT VARIABLE OF STUDENT SELF CONCEPT AND INDEPENDENT VARIABLES OF INVOLVEMENT IN AND SATISFACTION WITH DECISION MAKING

Dependent Variables Self Observation Scales	Decision Involvement Extra School	Decision Involvement School Wide	Decision Involvement Unit Wide	Decision Involvement Total	Satisfaction With Decision Making Extra School	Satisfaction With Decision Making School Wide	Satisfaction With Decision Making Unit Wide	Satisfaction With Decision Making Total
Self Acceptance	.159 (.323)	.300 (.054)	.300 (.054)	.306* (.049)	.110 (.502)	.129 (.575)	.143 (.623)	.156 (.609)
Self Security	-.010 (.951)	.010 (.950)	.049 (.759)	.022 (.888)	.044 (.780)	-.039 (.802)	.023 (.883)	.022 (.884)
Social Maturity	.039 (.805)	.212 (.180)	.427* (.005)	.248 (.115)	.081 (.622)	.141 (.616)	.342* (.027)	.201 (.204)
Social Confidence	.000 (.493)	.235 (.136)	.243 (.121)	.177 (.269)	.083 (.604)	.193 (.224)	.167 (.297)	.170 (.288)
School Affiliation	.012 (.940)	-.028 (.857)	-.184 (.249)	-.075 (.647)	-.019 (.904)	-.064 (.695)	-.264 (.092)	-.264 (.507)
Teacher Affiliation	.013 (.932)	.251 (.109)	.378* (.014)	.234 (.137)	.056 (.729)	.169 (.291)	.227 (.149)	.227 (.302)
Peer Affiliation	.045 (.778)	.239 (.129)	.239 (.128)	.203 (.201)	.031 (.842)	.067 (.680)	.092 (.572)	.092 (.648)

Note: Exact probabilities levels in parentheses
Significant at .05 level

Table 33 also shows the correlational matrix for the independent dent variable, satisfaction with decision making and the dependent variable, self observation scales. The correlation between unit teachers' perceptions of satisfaction with decision making (unit wide) and the self observation scale (social maturity) was significant at the .05 level of confidence.

Additional correlations between the subscales of satisfaction with decision making and the dependent variable, student self concept were not significant at the .05 level of confidence.

Tables 34 through 40 illustrate the relationship between the scores of the independent variables of involvement in and satisfaction with decision making and the dependent variables of student affective behavior which is comprised of seven subscales including: self acceptance, self security, social maturity, self confidence, self affiliation, teacher affiliation, peer affiliation.

Table 34 illustrates the relationship between the independent variables of decision involvement and satisfaction with decision making and the dependent variable of student self concept (self acceptance). Over 29 percent of the variation of self acceptance was explained by the independent variables. However, the significance level indicated that none of the predictor variables accounted for a significant amount of the variation of self acceptance. This table indicated that the independent variable of total decision involvement had the greatest impact on the dependent variable, although the relationship was not statistically significant.

TABLE 34

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF SELF-ACCEPTANCE
F-Ratio = 1.66 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .1483

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Total	.3058	.0935	.052
2	Decision Involvement Extra School	.3663	.1342	.189
3	Satisfaction With Decision Making School Wide	.4464	.1992	.091
4	Satisfaction With Decision Making Unit Wide	.4820	.2323	.221
5	Satisfaction With Decision Making Total	.5152	.2654	.217
6	Satisfaction With Decision Making Extra School	.5223	.2728	.560
7	Decision Involvement Unit Wide	.5236	.2741	.811
8	Decision Involvement School Wide	.5410	.2727	.366

Table 35 presents the relationships between the independent variables and the dependent variable of self security. About 12 percent of the variation of self security was explained by the independent variables. Decision involvement (unit wide) had the most influence on the dependent variable although not at the .05 level of significance.

Table 36 presents the relationship between the independent variables and the dependent variable of social maturity. Over 32 percent of the variation of social maturity was determined by the independent variables. Decision involvement (unit wide) had the greatest influence on the independent variable, accounting for an 18 percent variation with a .005 level of significance.

Table 37 illustrates the relationship between the independent variables and the dependent variable of social confidence. About 19 percent of the variation of social confidence was determined by the independent variables. Decision involvement (unit wide) had the greatest influence on the dependent variable accounting for 6 percent variation, but the significance level indicated the relationship was not statistically significant at the .05 level.

Table 38 depicts the relationship between the independent variables and the dependent measure of self affiliation. The amount of variation explained by the independent measures was about 13 percent. The level of significance indicated that these relationships were not statistically significant at the .05 level.

TABLE 35

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF SELF SECURITY
F-Ratio = .55 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .8108

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.0490	.0024	.761
2	Satisfaction With Decision Making School Wide	.0866	.0075	.661
3	Decision Involvement School Wide	.1143	.0131	.650
4	Satisfaction With Decision Making Total	.1468	.0216	.580
5	Decision Involvement Extra School	.1999	.0400	.418
6	Decision Involvement Total	.2874	.0826	.217
7	Satisfaction With Decision Making Unit Wide	.2979	.0888	.640
8	Satisfaction With Decision Making Extra School	.3473	.1206	.289

TABLE 36

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF SOCIAL MATURITY
F-Ratio = 1.90 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .0954

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.4273	.1826	.005*
2	Decision Involvement Extra School	.4553	.2073	.284
3	Decision Involvement Total	.4673	.2183	.474
4	Decision Involvement School Wide	.5445	.2965	.053
5	Satisfaction With Decision Making Extra School	.5535	.3064	.484
6	Satisfaction With Decision Making School Wide	.5594	.3130	.572
7	Satisfaction With Decision Making Unit Wide	.5611	.3148	.770
8	Satisfaction With Decision Making	.5670	.3215	.576

*Significant at .05 level

TABLE 37

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF SOCIAL CONFIDENCE
F-Ratio = .91 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .5173

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.2434	.0593	.125
2	Decision Involvement School Wide	.2786	.0776	.390
3	Decision Involvement Extra School	.3317	.1100	.250
4	Decision Involvement Total	.3898	.1520	.190
5	Satisfaction With Decision Making Extra School	.4235	.1793	.288
6	Satisfaction With Decision Making Total	.4255	.1811	.790
7	Satisfaction With Decision Making Unit Wide	.4257	.1812	.937
8	Satisfaction With Decision Making School Wide	.4314	.1861	.665

TABLE 38

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF SELF AFFILIATION
F-Ratio = .58 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .7899

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Satisfaction With Decision Making Unit Wide	.2639	.0696	.095
2	Decision Involvement Total	.2974	.0884	.382
3	Satisfaction With Decision Making Extra School	.3073	.0944	.624
4	Decision Involvement Unit Wide	.3144	.0988	.676
5	Decision Involvement Extra School	.3167	.1003	.814
6	Decision Involvement School Wide	.3173	.1007	.906
7	Satisfaction With Decision Making School Wide	.3180	.1011	.894
8	Satisfaction With Decision Making Total	.3547	.1258	.349

TABLE 39

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF TEACHER AFFILIATION
F-Ratio = 1.73 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .1290

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.3776	.1426	.015
2	Satisfaction With Decision Making Unit Wide	.4249	.1805	.192
3	Decision Involvement Extra School	.4398	.1934	.447
4	Decision Involvement Total	.4646	.2158	.317
5	Decision Involvement Total	.5268	.2775	.093
6	Satisfaction With Decision Making Extra School	.5408	.2924	.403
7	Satisfaction With Decision Making Total	.5443	.2962	.677
8	Satisfaction With Decision Making School Wide	.5497	.3021	.606

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1496

TABLE 40

REGRESSION ANALYSIS WITH DEPENDENT VARIABLE OF PEER AFFILIATION
F-Ratio = 1.41 with 8 and 32 Deg. Freedom
Significance Level of F-Ratio = .2297

Step No.	Variable Entered	Multiple Correlation Coefficient	Coefficient of Determination	Significance Level
1	Decision Involvement Unit Wide	.2391	.0572	.132
2	Satisfaction With Decision Making Unit Wide	.3286	.1080	.149
3	Decision Involvement School Wide	.3501	.1226	.438
4	Satisfaction With Decision Making School Wide	.4220	.1781	.128
5	Satisfaction With Decision Making Total	.4308	.1856	.574
6	Decision Involvement Extra School	.4685	.2195	.233
7	Decision Involvement Total	.5057	.2557	.214
8	Satisfaction With Decision Making Extra School	.5107	.2609	.643

Table 39 depicts the relationship of the independent variables and the dependent variable of teacher affiliation. The amount of the variation explained by the independent measures was about 30 percent. Decision involvement (unit wide) had the greatest influence on the dependent variable accounting for about 14 percent of the variation. The level of significance indicated that the relationship was significant at the .015 level.

Table 40 illustrates the relationship of the independent variables and the dependent variable of peer affiliation. About 26 percent of the variation of peer affiliation was determined by the independent variables. Decision involvement (unit wide) accounted for about 16 percent variation. The level of significance indicated that those relationships were not statistically significant.

In summary, the correlations based upon the scales, between involvement in decision making and the specific self observation scales were significant at the .05 level. The correlations between fatisfaction with decision making and the self observation scales were not significant at the .05 level of confidence. Further analysis of the data for the seven regression models presented in Tables 33 through 40 demonstrated a statistically significant relationship between the dependent measures of student affective behavior which includes social maturity and teacher affiliation and the independent measure of decision involvement (unit wide). However, the significance level of the F-ratio of each of the regression equations indicated that the independent variables did impact upon the dependent variables at the

.05 level of significance. Therefore, because the data did not demonstrate sufficient significant relations among the variables, the null Hypothesis Four was accepted and the null Hypothesis Eight was accepted.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS, AND IMPLICATIONS

This chapter includes a discussion of the summary, findings, conclusions, and implications of the study. The first section contains a summary of the study. The second section summarizes the findings and presents the conclusions of the study. The final section presents the implications for practice and for further research.

Summary of the Study

It was the purpose of this study to examine the validity of the assumption that teacher involvement in and satisfaction with decision making is systematically related to such organizational effectiveness criteria as teacher job satisfaction, student achievement in reading and mathematics, and student affective behavior in elementary schools that have implemented Individually Guided Education.

Individually Guided Education (IGE) was developed at the Wisconsin Research and Development Center for Cognitive Learning in cooperation with other educational agencies. IGE has been defined as a comprehensive alternative form of elementary schooling designed to produce higher educational achievements through providing for differences among students in learning rates, learning styles, and other characteristics (Klausmeier, et al., 1971, p. 17).

The focus of this study was on one component of IGE, the multiunit organizational structure, which is designed to facilitate open communication among school personnel, educational and institutional

decision making at appropriate levels, and accountability of educational personnel at all levels (Klausmeier, et al, 1971, p. 17). The multi-unit school structure consists of three interrelated hierarchical levels: the Instruction and Research Unit (I&R), the Instructional Improvement Committee (IIC), and the Systemwide Program Committee (SPC).

In IGE schools, I&R units replace the age-graded self-contained classroom organization which not only creates the new role of the unit leader, but also gives greater depth and meaning to the roles of the principal, teacher, and other personnel. A typical I&R unit includes the unit leader, three to five staff members, a clerical or instructional aide, teacher intern, and 100 to 150 students. The major function of each I&R unit is devising, conducting, and evaluating an instructional program for each unit in the school.

Decision making in IGE schools at the I&R unit level is a participative effort involving the administrators and teachers working together. Provisions are made to involve all staff members of IGE schools in the sharing of decisions. This study was designed to investigate the relationship between the extent of involvement in and satisfaction with decision making and various measures of teacher and student outcomes. It was hypothesized that involvement in decision making increases satisfaction, productivity, and organizational effectiveness.

The theoretical and conceptual foundation of this study includes three basic theories--systems theory, social systems theory, and decision theory. Within the context of this study, the school was considered as a general system, where inputs are transformed into outputs. The inputs consisting of teachers, students, materials, and facilities are

transformed into a variety of outputs including teacher job satisfaction, student cognitive behavior, and student affective behavior.

Social systems theory constituted a second conceptual base for the study. The central focus of the social system as defined for this study was the I&R unit of an IGE elementary school. The I&R unit is the locus of the educational processes which convert inputs into outputs.

It is possible to examine decision theory within the context of social systems theory. Organizational theorists have recognized the value of participation as a way to increase performance. The literature supports the hypothesis that as teachers become more involved in participatory decision making, they identify with goals of the organization and are thereby motivated to perform at a higher level. This study integrates decision theory with social systems theory to study the relationship between the independent and dependent variables. The institutional role expectations are represented by the items of the Decision Involvement Analysis instrument.

According to social systems theory, congruence between the institutional role expectations and the need dispositions of members of the I&R unit determine a measure of satisfaction with decision making which is the second independent variable.

Social systems theory provides a useful framework for analyzing effectiveness as an organizational outcome which, according to theorists, is a function of an individual's ability to participate in organizational decisions. This study used multiple effectiveness criteria--teacher job satisfaction, student achievement in reading and mathematics

and student affective behavior--as measures of organizational effectiveness. These constitute the major dependent variables. Greater organizational effectiveness is hypothesized to result from congruence of the institutional role expectations and role behavior.

The first dependent measure was teacher job satisfaction. Research conducted in both industrial settings and schools has found a positive relationship between participation in decision making and job satisfaction. The second organizational outcome measure was student achievement in reading and mathematics, and the third was student affective behavior.

The components of the multiunit school organization were developed to encourage participative decision making which should, in turn, result in higher student achievement and improved self concept. Thus, students in IGE schools should exhibit high student achievement and also should develop a healthy self concept (Klausmeier, 1977).

The final organizational outcome measure employed in this study was student affective behavior. An individual's self concept is developed through a series of interactions with the environment in which parents, peers, and teachers play a significant part. The influence of schooling and of teachers upon a student's self concept is often neglected.

Organizational theorists emphasize the positive relationship between participation in decision making as a way to increase performance. The present study theorized that involvement in and satisfaction with decision making is linked to teacher job satisfaction, student achievement, and student affective behavior. The independent variables

were measured by the Decision Involvement Analysis Questionnaire which reports teachers' perceptions of their involvement in and satisfaction with decision making.

The dependent variable of teacher job satisfaction was measured by the Teacher Job Satisfaction Survey which asked staff members to indicate their feelings of satisfaction with their particular situation. Student achievement in reading and mathematics was measured by a battery of standardized tests--Comprehensive Tests of Basic Skills, Form S, 1974 (CTBS/S). Student affective behavior was measured by a Self Observation Scale (SOS) developed by Katzenmeyer and Stenner (1973).

The population for this study included all multiunit IGE schools listed in the Wisconsin Research and Development Center Directory, 1973-74. These schools numbered 959 and had been implementing IGE for two years or more. A set of criteria for participation in the study required the implementation of the multiunit school organization and of the Instructional Programming Model (IPM) in both reading and mathematics.

Stratified random sampling was employed to select 41 schools which met the selection criteria and were willing to participate in the study. Each school was contacted by telephone in the order specified until 41 schools (including 8 "city" schools and 33 schools in the "other" category) were found which met the operational criteria. An intermediate I&R unit within each school that agreed to participate was then selected randomly. Students within the selected unit were assigned randomly to the reading, mathematics, and self concept tests. Researchers from the Research and Development Center traveled to the schools to

administer the tests. Teacher questionnaires were sent to the schools prior to the on-site visit and were collected by the researchers on the day of testing.

The unit of analysis for this study was the I&R unit. Unit mean scores were computed for the Decision Involvement Analysis Questionnaire and the Teacher Job Satisfaction Survey. In addition, unit mean scores were also calculated for student achievement in reading and mathematics and student self concept. Computer programs were used to solve multiple regression equations and compute Pearson product moment correlations.

The following hypotheses, stated in the null form, were tested to determine the interrelationships of involvement in and satisfaction with decision making and teacher job satisfaction, student achievement in reading and mathematics, and student self concept.

1. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and teacher job satisfaction.

2. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in reading.

3. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student achievement in mathematics.

4. There is no relationship between the unit teachers' perceptions of the extent of involvement in decision making and student affective behavior.

5. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and teacher job satisfaction.

6. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in reading.

7. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student achievement in mathematics.

8. There is no relationship between the unit teachers' perceptions of satisfaction with decision making and student affective behavior.

Findings and Conclusions

In this section will be reported the findings derived from analysis of the data and testing of the hypotheses. Conclusions derived from these results will also be reported. The probability level of all tests of statistical significance was established at the .05 level of significance.

Table 41 presents, in summary form, the relationships which were determined by the Pearson product-moment correlations or by solving multiple regression equations for the variables used in this study.

Analysis of the data relevant to Hypothesis One produced correlations between the scales of involvement in decision making and the scales of teacher job satisfaction which were statistically significant at the .05 level of confidence. The Pearson product-moment correlations were further supported by the results of the multiple regression analysis which showed that the independent variables did impact significantly upon the dependent variables of teacher job satisfaction. Therefore, the null hypothesis could be rejected.

Analysis of data relevant to Hypothesis Two produced correlations between involvement in decision making (unit wide) and student achievement in reading vocabulary, comprehension, and total reading. However,

the results of the multiple regression analysis were not statistically significant. There, the null hypothesis was accepted.

Analysis of data relevant to Hypothesis Three revealed a correlation between involvement in decision making (unit wide) and student achievement in math applications. However, the Pearson product correlations were not supported by the results of the multiple regression analysis which were not statistically significant. Therefore, the null hypothesis was accepted.

Analysis of data relevant to Hypothesis Four discovered a correlation between unit wide involvement in decision making and the student self observation scales including social maturity and teacher affiliation. However the results of the multiple regression analysis showed that the independent variables did not impact upon the dependent variables of the student self observation scales at a statistically significant level. Therefore, the null hypothesis was accepted.

Analysis of data relevant to Hypothesis Five produced correlations between the scales of satisfaction with decision making and the scales of teacher job satisfaction. The Pearson product-moment correlations were supported by the results of multiple regression analysis which showed that the independent variables impacted significantly upon the dependent variable of teacher job satisfaction. Therefore, the null hypothesis was rejected.

Analysis of data relevant to Hypothesis Six revealed no significant correlations between the scales of satisfaction with decision making and student achievement in reading. In addition, the results of the multiple regression analysis did not support rejection of the

TABLE 41

RELATIONSHIPS OF VARIABLES EXAMINED BY EIGHT HYPOTHESES

	Teacher Job Satisfaction									Student Achievement (Reading)			Student Achievement (Mathematics)				Self Observation Scales						
	Administration	Co-worker	Career Future	School Identification	Financial	Working Conditions	Pupil Relations	Community Relations	Total Job Satisfaction	Vocabulary	Comprehension	Reading Total	Computation	Concepts	Applications	Mathematics Total	Self Acceptance	Self Security	Social Maturity	Social Confidence	School Affiliation	Teacher Affiliation	Peer Affiliation
Decision Involvement Extra School	X		X	X	X	X	X	X	X														
Decision Involvement School Wide	X			X		X	X	X	X	X	X												
Decision Involvement Unit Wide	X		X	X		X	X	X	X	X	X	X			X				X			X	
Decision Involvement Total	X		X	X	X	X	X	X	X	X							X						
Satisfaction With Decision Making Extra School	X	X*	X	X	X*	X	X	X	X														
Satisfaction With Decision Making School Wide	X		X	X	X	X	X	X	X														
Satisfaction With Decision Making Unit Wide	X	X	X	X		X	X	X	X	X									X				
Satisfaction With Decision Making Total	X*	X	X*	X*	X	X*	X*	X*	X*														

X = correlation at .05 level
X* = multiple regression at .05 level

null hypothesis. Therefore, the null hypothesis was accepted.

Analysis of data relevant to Hypothesis Seven produced no significant correlations between the scales of satisfaction with decision making and student achievement in mathematics. Furthermore, the results of multiple regression analysis did not support rejection of the null hypothesis. Therefore, the null hypothesis was accepted.

Analysis of data relevant to Hypothesis Eight did not produce significant correlations between involvement in decision making and student self concept. The results of the multiple regression analysis did not support rejection of the null hypothesis. Therefore, the null hypothesis was accepted.

Conclusions

1. Unit teachers' perceptions of the extent of their involvement in decision making was related to teacher job satisfaction.

2. Unit teachers' perceptions of their satisfaction with decision making was related to teacher job satisfaction.

Implications for Practice and Further Research

This section discusses the implications for practice in IGE schools which could be deduced from the results of the study. The final portion of the chapter discusses suggestions for further research which is derived from the present study.

Implications for Practice

First, the results of this study suggest that participatory decision making is related to a satisfied I&R unit staff. Involving

teachers in the school decision making process by obtaining their opinions, ideas, and being concerned for their basic personal needs is an integral part of multiunit organizational component of IGE. Furthermore, this relationship supports the theoretical and conceptual basis of social systems theory which perceives educational administration as a social process.

Second, the results of this study indicate that satisfaction with involvement in decision making is related to teacher job satisfaction. Involvement in determining the groupings for instruction, determining the design and content of the curriculum, determining the specific instructional objectives for each child, and determining the areas of specialization for each teacher are of utmost concern to I&R unit staff members. In terms of the IGE organizational component, instructional objectives and curricular decisions are more flexible and open to periodic revision, and not predetermined by administrators. These findings lend credence to the hypothesized relationship that participation in decision making is related to an organizational outcome. Also, congruence between the institutionalized role expectations and teacher behavior produces greater organizational effectiveness, which is a basic premise of social systems theory.

Two major implications for practice may be drawn from the study:

1. The multiunit organizational structure of IGE should permit a wide range of opportunities for involvement in the decision making process at the unit, school, and district levels. However, not all staff members desire the same degree of involvement and some may be

very satisfied to permit others to make the decisions.

2. The results of this study clearly indicate that administrators must encourage I&R unit teachers to participate in the decision making process at all levels. Administrators and staff members must work together to expand this domain in the multiunit school.

Implications for Further Research

Extensive research has been undertaken concerning decision making in IGE/MUS-E schools. Loose (1973) analyzed decisions made by the IIC; Wright (1976) constructed an instrument to measure the real individual level of decision involvement in IGE schools; Holmquist (1976), using a case study approach, investigated the decision making process in IGE schools; Nerlinger (1975) analyzed the relationship of involvement, representation, and I&R Unit effectiveness. Lastly, this study has explored the relationship of involvement in and satisfaction with decision making related to a set of organizational outcome measures. It is at this juncture that future research in the area of decision making must be determined. Several suggestions for future research follow.

First, data should be gathered on the types of decision strategies used in IGE schools. Little, if any, information is available on the precise methods used to reach a decision in IGE schools. It would be beneficial to know whether a routine, creative, inspirational consultative, or combination of strategies are used by administrators, unit leaders, and teachers within the organizational context of IGE.

Second, research should be done on the role of students in the decision making process of IGE schools. It might be that a greater amount of student involvement and feedback exists in IGE schools relative to instructional and curricular objectives which might be related to student cognitive and affective behavior.

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APPENDICES

APPENDIX A

Form Approved
OMB No: 51-S75077
Approval Expires June 1976

DECISION INVOLVEMENT ANALYSIS

You are participating in a study being conducted by the Wisconsin Research and Development Center for Cognitive Learning. The purpose of this instrument is to determine the nature of involvement in the decision-making process in IGE Multiunit Elementary Schools.

This instrument consists of 20 decision items about which questions are asked. Completion of the entire instrument should require less than fifteen minutes of your time. All responses will remain confidential and none will be identified by person, school, or school district.

Please answer the four questions asked about each decision item by placing your responses in the spaces provided. A sample item, which has been marked, is provided for your convenience. Upon completing the instrument, please place it in the envelope provided and hold it for the researcher who will visit your school and pick up your envelope of completed instruments.

Your participation in this study is sincerely appreciated.

Published by The Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education and Welfare. The opinions expressed herein do not necessarily reflect the position of the National Institute of Education and no official endorsement by the National Institute of Education should be inferred.

DECISION INVOLVEMENT ANALYSIS

Questions	Sample Item	Use the Following Numbers to Respond to Questions 1 and 2.
Please answer the following four questions in terms of your school by placing the appropriate number of the response in the boxes provided for each decision item. The responses are listed in the right hand column of this sheet. Place only one answer in each box.	The allocation of materials, equipment, and supplies to units within your school	1 - Board of Education 2 - Superintendent or Other Central Office Personnel 3 - Negotiation Teams 4 - Systemwide Program (Policy) Committee (SPC) 5 - Principal or Assistant Principal 6 - Entire Faculty as a Group 7 - Instructional Improvement Committee (IIC) 8 - Unit Leader 9 - Unit Teachers as a Group (I & R Unit) 10 - Individual Teacher 11 - Parents or Parent Advisory Committee 12 - Student 13 - No One Presently Responsible
1. Which person or group presently makes the final decision on this item?	1. [5]	
2. Which person or group should make the final decision on this item?	2. [7]	
3. How much involvement do you presently have in making this decision?	3. [2]	Use the Following Numbers to Respond to Question 3. 1 - Very little involvement 2 - Little involvement 3 - Some involvement 4 - Much involvement 5 - Very much involvement
4. To what extent are you satisfied with your involvement in making this decision?	4. [1]	Use the Following Numbers to Respond to Question 4. 1 - Not satisfied 2 - Somewhat satisfied 3 - Satisfied 4 - Quite satisfied 5 - Very satisfied

APPENDIX B

Form Approved
OMB No: 51-S75077
Approval Expires June 1976

JOB SATISFACTION SURVEY

You are participating in a study conducted by the Wisconsin Research and Development Center for Cognitive Learning. The purpose of this instrument is to determine the nature of job satisfaction in IGE Multiunit Elementary Schools.

This instrument to be completed by the unit (team or learning community) leader and staff teachers consists of 50 job satisfaction items. Completion of the entire instrument should require about 30 minutes of your time. It is important that all items receive a response as any item left blank will give a distorted picture of your school. All responses will remain confidential and none will be identified by person, school, or school district.

Please answer the questions about each item by placing your response in the space provided. Upon completing the instrument please place it in the envelope provided and hold it for the researcher who will visit your school and pick up your sealed envelope of completed instruments.

Your participation in this study is sincerely appreciated.

Published by the Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education and Welfare. The opinions expressed herein do not necessarily reflect the position of the National Institute of Education and no official endorsement by the National Institute of Education should be inferred.

JOB SATISFACTION SURVEY

Directions: Please indicate your feelings of satisfaction with your situation. For each item please answer by circling the number in the coluun most accurately describing your feelings.

1 = Not satisfied
2 = Somewhat satisfied
3 = Satisfied
4 = Quite satisfied
5 = Very satisfied

How satisfied are you with:

1. the professional competence and leadership of your building administrators? 1 2 3 4 5
2. the ability of your building administrators to encourage people to work together? 1 2 3 4 5
3. the manner in which school policies and regulations are enforced? 1 2 3 4 5
4. the recognition you receive from your building administrators for your teaching achievements? 1 2 3 4 5
5. the procedures used to evaluate teachers in your school? 1 2 3 4 5
6. the fairness of the building administration in the assigning of extra duties? 1 2 3 4 5
7. the opportunities provided to discuss problems with building administrative personnel? 1 2 3 4 5
8. the trust you have in your building administrators? 1 2 3 4 5
9. the administrators' trust in you? 1 2 3 4 5
10. the innovativeness of your building administrators? 1 2 3 4 5
11. the personal and social relationships you have with other teachers? 1 2 3 4 5
12. the recognition you get from other teachers for your work? 1 2 3 4 5
13. the quality of work of other teachers in your school? 1 2 3 4 5
14. the amount of work done by other teachers in your school? 1 2 3 4 5

1 = Not satisfied
2 = Somewhat satisfied
3 = Satisfied
4 = Quite satisfied
5 = Very satisfied

How satisfied are you with:

15. teaching, in light of what you expected to be doing as a teacher?	1	2	3	4	5
16. your future in your school district?	1	2	3	4	5
17. your opportunities for growth in your profession?	1	2	3	4	5
18. your school as an organization to work for?	1	2	3	4	5
19. the professionalism your school district shows toward teachers?	1	2	3	4	5
20. the degree of your involvement in your school?	1	2	3	4	5
21. the general reputation of your school?	1	2	3	4	5
22. the opportunities that you have to influence school policy?	1	2	3	4	5
23. your awareness of what is "going on" in your school?	1	2	3	4	5
24. the goals emphasized by your school?	1	2	3	4	5
25. the amount of money you make?	1	2	3	4	5
26. the salary schedule and fringe benefits in your school district?	1	2	3	4	5
27. the physical facilities of your school?	1	2	3	4	5
28. the number of students accommodated in your school?	1	2	3	4	5
29. the availability of appropriate instructional materials and equipment?	1	2	3	4	5
30. the arrangement of space and equipment in your school?	1	2	3	4	5
31. the amount of preparation time provided for teachers in your school?	1	2	3	4	5
32. the custodial services provided in your school?	1	2	3	4	5
33. the quality of the work you do?	1	2	3	4	5
34. the extent to which you are motivated by your job?	1	2	3	4	5

1 = Not satisfied
2 = Somewhat satisfied
3 = Satisfied
4 = Quite satisfied
5 = Very satisfied

How satisfied are you with:

35. the freedom that you have to experiment with instructional methods? 1 2 3 4 5

36. the intellectual stimulation that you receive from your work? 1 2 3 4 5

37. the opportunities that you have to teach in your major areas of interest? 1 2 3 4 5

38. the amount of work you are expected to do? 1 2 3 4 5

39. the amount of time that you actually spend in teaching? 1 2 3 4 5

40. the total time that you spend with students? 1 2 3 4 5

41. the number of students for whom you are responsible? 1 2 3 4 5

42. the extent to which you are able to meet your students' academic needs? 1 2 3 4 5

43. the extent to which you are able to meet your students' affective needs? 1 2 3 4 5

44. the quality of your interactions with your students? 1 2 3 4 5

45. the extent to which the community recognizes and appreciates its educators? 1 2 3 4 5

46. the adequacy of financial support provided your school by the community? 1 2 3 4 5

47. the understanding of your school's program by parents and the community? 1 2 3 4 5

48. the community's involvement in your school's program? 1 2 3 4 5

49. the methods used to communicate with the community about your school? 1 2 3 4 5

50. the methods used to report student progress to parents? 1 2 3 4 5

APPENDIX C

Comprehensive Test of Basic Skills, Level 2 Forms Expanded Edition.

CTB/McGraw Hill, Del Monte Research Park, Monterey, California, 1974.

APPENDIX D

Self Observation Scale (SOS), Intermediate Level, Form C,
National Testing Service, Durham, North Carolina, 1973.

APPENDIX E

TELEPHONE SURVEY

CODE: C = Cities, 200,000 +
O = Others (Under 200,000)
1st # = Random Order
2nd # = Directory Number

CHECK APPROPRIATE BOX(ES):

☐ Yes, _____

☐ Maybe, _____

☐ No, _____

☐ Call back, _____

Name of School: _____

Location: _____

Phone: _____

Person Contacted: _____

Researcher: _____

Date: _____

Follow up letter sent on:

_____

_____

_____

Confirmation call back:

_____

_____

Inconvenient time for visitation:

_____

_____

Comments:

193a

193b

Telephone Interview to Identify 40 Schools
as Subjects for the "R-3 Correlational Studies"
and the "Evaluation of IGE vs. Non-IGE Study"

Comments

1a. Do you still consider your school an IGE school?

a) Yes

b) We're working on it

c) No. Would you mind telling us why not? _____

_____

1b. How many students are in your school? _____

We'd like to ask about your school's organization:

2. What grade level equivalents are included in your school? _____

3a. Is your school organized into units, teams, or learning communities?

a) Yes (this response includes "partially," "some," or "all" answers)

b) No (no units at all)

3b. How many units (learning communities) are in your school? _____

3c. Describe the unit (learning community) structure (excluding student teachers, interns, and aides). For each unit (learning community) give:

	1	2	3	4	5	6	7	8
Unit Name								
Number of teachers assigned to the unit full time (including unit leader)								
Number of pupils (as exact as you can give it)								
Grade level equivalents								
Does the unit staff meet at least once weekly?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

COMMENTS:

Comments

3d. Does this description account for all pupils in the school?

a) Yes

b) No. If no, explain who isn't included in these units:

_____

1) kindergarten
2) special education pupils
3) other "regular" pupils (i.e., not special education)

4a. Do you have unit leaders (or learning community leaders) assigned for a year or more to each unit (learning community)?

a) Yes, for each unit (learning community)

b) Yes, for some units (learning communities); not for others

c) No, none at all

4b. Does your school have an Instructional Improvement Committee (IIC) or a Program Improvement Council (PIC)?

a) Yes

b) No

c) Don't know; if c is chosen, ask:

Do you meet regularly with the unit leaders (learning community leaders)?

1) Yes

2) No

4c. If yes, how many people are the regular members of this group? _____

Comments

4d. Does this include the principal and all unit leaders (learning community leaders)?

a) Yes

b) No

4e. How often does the IIC (or PIC) meet? _____

a) once a semester
b) once a month
c) twice a month (every two weeks)
d) once a week

5. Do you participate in activities with other IGE schools at least once a year? These could be schools within your district (such as in a Systemwide Program Committee [SPC]) or schools outside your district (such as a League, Network, PACT, or HUB).

a) Yes

b) No

Now I'd like information about your school's instructional program in reading, and math. First, we'll talk about reading. Generally, we're looking for a sequence in which your teachers identify reading objectives for the students in their unit, preassess for those objectives, then group students according to which objectives they need to master, instruct on those objectives, then test again, and regroup.

6a. Have you done this entire process for reading in your whole school?

a) Yes

b) No, explain which students are excluded _____

_____

Comments

6b. Have you done it for two years or more (at least since October, 1973)?

a) Yes

b) No

(Refer to Organizational chart, and say "As you know we are interested in collecting data in one intermediate unit. I'd like more specific information about units _____, _____, and _____." (the intermediate units)

7a. Are any of the unit leaders in these intermediate units new to their units as of this September ('75)?

a) Yes, in unit(s) _____, _____, _____, (discount those units)

b) No

7b. In any of these (remaining) units are more than half of the teachers new to the unit this September?

a) Yes, in unit(s) _____, _____, _____.

b) No

In any of these (remaining intermediate) units, we are looking for that same instruction sequence in relation to mathematics. That is, math objectives are set for the students in the unit, there is preassessment, grouping for instruction, postassessment, and regrouping.

Comments

7c. Have these units done this entire process in math for at least one year? (i.e., since September, '74)

a) Yes, in all units

b) No, only in units _____, and _____

c) No, not in any units

7d. Have the majority of students in this (these) unit(s) had this instructional sequence in math last year? (either in the unit they are presently in or in another unit?) Explain.

a) Yes, for unit(s) _____

b) No

If more than one intermediate unit is left, randomly choose intermediate unit for study, and solicit participation of the randomly selected unit. If they seem at all interested, ask:

8. Are there non-IGE schools in your district?

a) Yes, is so approximately how many? _____

b) No

c) I don't know

APPENDIX F

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

1975-76

R-3 Research Project

General Information

1. This is a national study involving 40 IGE schools. One intermediate unit/team from each school will be participating. Each school and each unit have been chosen randomly.

2. One or two researchers from the R and D Center will be visiting the intermediate unit/team during one school day to collect data during the month of January or February.

3. The principal and the selected team members will receive indepth questionnaires in advance of the school visits. A packet with instruments and instructions for the principal, team leader, and teachers will be sent to the school prior to the visitation. The instruments need not be filled out in one sitting. You will have a period of at least 2 weeks to complete them. Contained in this packet will be the following instruments:

   a. Principal Instruments (Total Time [#1 & 2] 25-30 minutes)

      1) Background Information and Organizational Structure Survey (Form P)
      The purpose of this instrument is to obtain background data and to determine the nature of the organizational structure in IGE schools. It requires approximately 30 minutes to complete.

      2) Time Allocation of Instructional Personnel
      The purpose of this instrument is to obtain information about the utilization of time by staff members in I & R units. It requires approximately 15 minutes to complete.

      3) School Expenditure Data Form
      The purpose of this instrument is to provide information about the major direct and indirect costs involved in the operation of an IGE school.

b. Unit Leader Instruments (Total Time 1 1/2-2 hours)

1) Background Information and Organizational Structure Survey (Form UL)
The purpose of this instrument is to obtain background data and to determine the nature of the organizational structure in IGE schools. It requires approximately 20 minutes to complete.

2) Decision Involvement Analysis
The purpose of this instrument is to determine the nature of involvement in the decision-making process in IGE schools. It requires approximately 15 minutes to complete.

3) Principal Leadership Assessment
The purpose of this instrument is to determine the nature of the principal's leadership style. It requires approximately 10 minutes to complete.

4) Job Satisfaction Survey
The purpose of this instrument is to determine the extent of satisfaction with various aspects of the job in IGE schools. It requires approximately 30 minutes to complete.

5) Time Allocation of Instructional Personnel
The purpose of this instrument is to obtain information about the utilization of time by staff members in I & R units. It requires approximately 15 minutes to complete.

*6) Unit/Team Operations Questionnaire (Effectiveness Measure)
The purpose of this instrument is to investigate the degree (as perceived by the teachers) to which the team/unit accomplishes particular tasks which have been identified as belonging to the teaching team/unit. It requires approximately 30 minutes to complete.

c. Unit Teacher Instruments (Total Time 2-2 1/2 hours)

1) Background Information and Organizational Structure Survey (Form T)
The purpose of this instrument is to obtain background data and to determine the nature of the organizational structure in IGE schools. It requires approximately 20 minutes to complete.

2) Decision Involvement Analysis
The purpose of this instrument is to determine the nature of involvement in the decision-making process in IGE schools. It requires approximately 15 minutes to complete.

3) Unit Leader Leadership Assessment
The purpose of this instrument is to determine the nature of the unit leader's leadership style. It requires approximately 10 minutes to complete.

4) Principal Leadership Assessment
The purpose of this instrument is to determine the nature of the principal's leadership style. It requires approximately 10 minutes to complete.

5) Job Satisfaction Survey
The purpose of this instrument is to determine the extent of satisfaction with various aspects of the job in IGE schools. It requires approximately 30 minutes to complete.

6) Time Allocation of Instructional Personnel
The purpose of this instrument is to obtain information about the utilization of time by staff members in I & R units. It requires approximately 15 minutes to complete.

*7) Unit/Team Operations Questionnaire (Effectiveness Measure)
The purpose of this instrument is to investigate the degree (as perceived by the teachers) to which the team/unit accomplishes particular tasks which have been identified as belonging to the teaching team/unit. It requires 30 minutes to complete.

4. During the visit, the researcher(s), in cooperation with the unit teachers will administer a standardized self concept survey to one third of the students in the unit, a mathematics standardized test to the second third of the unit, and a standardized reading test to the final third of the students in the unit. Thus, no student will take more than one test. These standarized instruments are:

*a. Intermediate Self Observation Scales (SOS) California Form (C)
This instrument takes approximately 25 minutes.

b. California Test of Basic Skills (Reading and Mathematics)-Form S
This instrument takes approximately 1 1/2 hours.

5. The purpose of this research is twofold:

a. We will relate the "effectiveness" of the unit to student affective behavior and student achievement. The question that arises is: "Is there a positive correlation between team or unit effectiveness and student self concept* and achievement?" We feel that in addition to being of significant value to researchers at the R & D Center, the answer to this question would be of great interest to you as you promote, develop and refine your IGE school.

*Emphasis supplied for this study only

b. We will be examining the factors (organizational structure and leadership) that contribute most strongly to teacher satisfaction.

6. a. We will send self concept and achievement profiles to each participating unit/team as soon as the publisher sends them to us--at no cost to the school.

b. When the entire study of 40 IGE schools is complete, we will send technical reports of the research as soon as the R & D Center makes them available--again at no cost to the school.

c. No schools or students will be identified in any reports.

7. Specific details on procedures will be sent to participating schools prior to visitation.

8. Additional R & D research, presently in the planning stage, will collect comparative school data on non-IGE schools.

R & D Research Team
Barbara Bocian
Robert Feldman
Diana Mendenhall
Conrad Sigurdson

Principal Investigators
Dr. James M. Lipham
Dr. Richard A. Rossmiller

Project Associate
Dr. Terry G. Geske

APPENDIX G

Name of School _____

Researcher(s) _____

PROCEDURAL DETAILS

BEFORE ARRIVING AT YOUR SCHOOL:

(1) a. In order that we may group and randomize children for testing purposes, please send me at your earliest convenience a list of the names of the children in unit/team _____, including year and month of birth, sex, and grade level equivalent.

SAMPLE: (1) Jane Aaron 65/3 - F - 5th
(2) Larry Brown 64/3 - M - 6th

Send student list to: R-3 Research Project, Room 571
1025 West Johnson Street
Madison, Wisconsin 53706

b. Please exclude from your list all children who participate in special education programs. They will not be included in this particular study.

c. After we receive your list, we will randomly place the children into 3 testing groups and will then send you the lists of children to facilitate testing arrangements in your school. This list will accompany teacher and principal questionnaire packet.

d. After receiving your list of children (1a.) and after these children have been randomly placed into 3 groups, we will fill in all the information needed on the student answer sheet prior to testing, so that teachers or students need not waste time on this procedure.

(2) The principal and the selected team teachers will receive their instruments prior to our visitation. Complete instructions will be included with the instruments. We will also send simplified directions for administering the math and reading achievement tests, in order that the teachers may review the directions prior to testing. *A researcher will be administering the self-concept test.

WHILE AT YOUR SCHOOL:

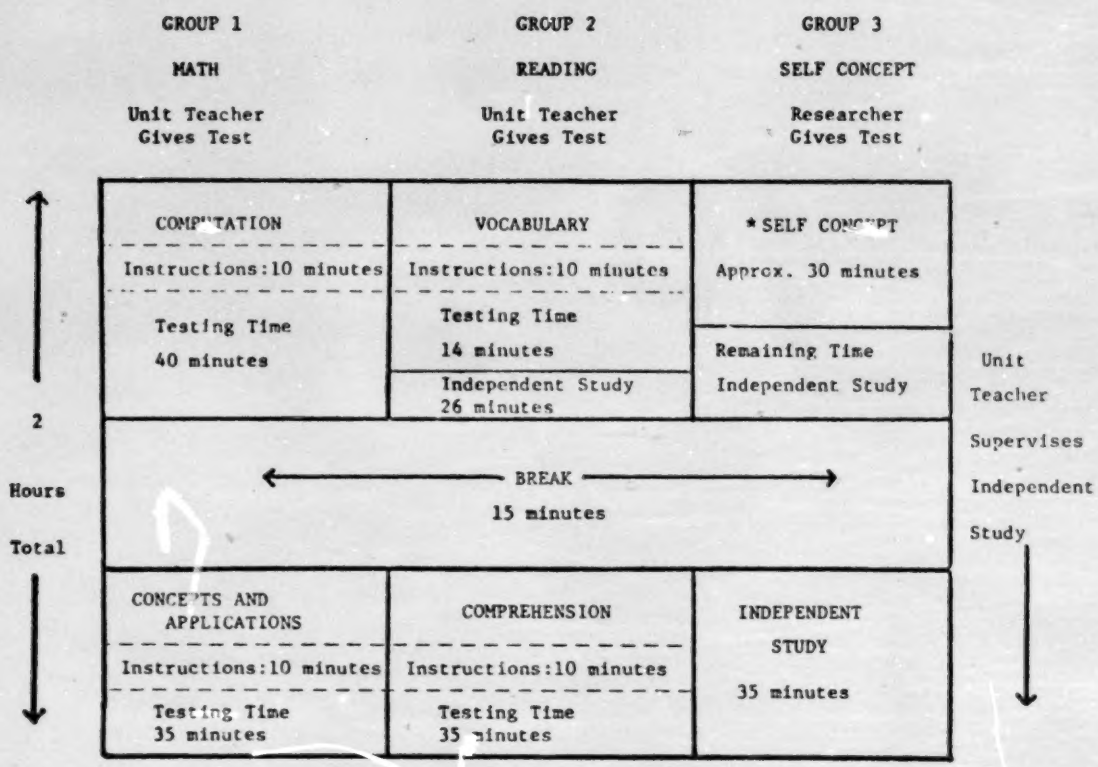
(1) Meeting with Teachers

We would like to arrive at your school in the morning of the day of testing, to meet with the selected team to discuss final arrangements for the testing procedure, and to help in any way possible. This would necessitate a specified meeting time of at least one half hour. We would like to begin testing in the morning whenever possible and finish by 11:00. We would appreciate meeting with the principal from 11:00 until noon.

*Emphasis supplied for this study only

(2) Testing Procedure for Children

We are requesting that children in the selected unit be divided by team members according to the grouping list as indicated in (1d.) above. The testing times of each test are shown in a diagram below. As indicated, each test requires different amounts of time. This will necessitate the need for quiet independent study (i.e., library book, seat work, etc.) for some students when they are not engaged in testing. We would appreciate team teachers preparing these students for this independent study, especially in Group 3, for these children will have a considerable amount of free time.



This grouping arrangement requires that one unit teacher be assigned to Group 1 and one unit teacher to Group 2 to administer the appropriate test to that group. The researcher will be responsible for giving the Self Concept Test, and will serve as overall facilitator of the testing procedure.

An example of a specific time schedule might look like the following:

8:00 - 8:30:		Meeting with Faculty
9:00 - 9:50:	(1)	Math Group takes Computation test.
	(2)	Reading Group takes Vocabulary test and does independent study.
	(3)	*Self Concept Group takes entire test and does independent study.
9:50 -10:10:		BREAK (OUTDOORS) FOR ALL CHILDREN
10:15 -11:00:	(1)	Math Group takes Concepts and Applications test.
	(2)	Reading Group takes Comprehension test.
	(3)	*Self Concept Group engages in independent study.
11:00 - Noon:		Meet with Principal

This time schedule may vary for your school, and we do want to accommodate whatever arrangement that best suits your needs.

APPENDIX H

the Wisconsin Research and Development Center for Cognitive Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

Agenda for Morning Meeting at School

1. (a) Do students know what group they are in?

   (b) Have plans been made for special education students?

   (c) Facilities for the grouping?

   Who will administer the tests?

	Person	Space Designation	Time of Test
1) Math	_____	_____	_____
2) Reading	_____	_____	_____
3) Self-Concept	Researcher	_____	_____

2. Have you made arrangements for individual study? What is your proposed schedule?

3. (a) CTBS

   (b) Check answer sheets for correct grade equivalent, age, sex, level, form. (Students' names will not be used on answer sheets).

4. Teachers, Unit leader, and Principal instruments.

5. New students.

Center Planning and Policy Committee

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Center Director

Wayne R. Otto
Associate Center Director and
Area Chairperson
Studies in Reading, Language
and Communication Processes

Marvin J. Fruth
Area Chairperson
Studies of Individualized
Schooling

Herbert J. Klausmeier
Area Chairperson
Studies of Cognitive
Learning and Development

James M. Lipham
Area Chairperson
Studies of Organization
for Instruction and
Administrative Arrangements

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